Cunningham Flood Detention Facility Certification Project

Final Initial Study and Mitigated Negative Declaration

Project No. 40264011

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TABLE OF CONTENTS

Page

LIST OF ACRONYMS III
KEY TERMINOLOGY V
SECTION 1: INTRODUCTION 1
SECTION 2: PROJECT DESCRIPTION 3
SECTION 3: ENVIRONMENTAL SETTING 29
SECTION 4: ENVIRONMENTAL EVALUATION 30
SECTION 5: REPORT PREPARATION 115
SECTION 6: REFERENCES ..... 116~~5~~

TABLES

TABLE 1.1: SUMMARY OF AGENCY APPROVALS 3
TABLE 2.1: CONSTRUCTION SCHEDULE 16
TABLE 2.2: CONSTRUCTION OFF-SITE TRIPS 16
TABLE 2.3: CONSTRUCTION HAUL TRIPS 17
TABLE 2.4: PROPOSED CONSTRUCTION EQUIPMENT 17
TABLE 2.5: BEST MANAGEMENT PRACTICES AND SANTA CLARA VALLEY HABITAT PLAN CONDITIONS INCORPORATED INTO THE PROPOSED PROJECT 20
TABLE 3.1: AIR QUALITY MONITORING SUMMARY 44
TABLE 3.2: SAN FRANCISCO AIR BASIN ATTAINMENT STATUS 45
TABLE 3.3: BAAQMD THRESHOLDS OF SIGNIFICANCE 47
TABLE 3.4: CRITERIA AIR POLLUTANT EMMISSIONS 50
TABLE 3.5: CONSTRUCTION AIR POLLUTANT EMISSIONS 52
TABLE 4.1: SPECIAL STATUS SPECIES WITH POTENTIAL TO OCCUR AT THE PROJECT SITE 56
TABLE 4.2: TREES PROPOSED FOR REMOVAL AT THE PROJECT SITE 61
TABLE 7.1: DESCRIPTION OF GREENHOUSE GASES ..... 75~~4~~
TABLE 7.2: CONSTRUCTION GREENHOUSE GAS EMISSIONS 78
TABLE 7.3: SCOPING PLAN MEASURES CONSISTENCY ANALYSIS 79
TABLE 9.1: NEW AND REPLACEMENT IMPERVIOUS AND SEMI-PERVIOUS SURFACES 91

FIGURES

FIGURE 1: REGIONAL LOCATION MAP 7
FIGURE 2: PROJECT VICINITY MAP 8
FIGURE 3A: PHOTOGRAPHS OF THE PROJECT SITE 9
FIGURE 3B: PHOTOGRAPHS OF THE PROJECT SITE 10
FIGURE 3C: PHOTOGRAPHS OF THE PROJECT SITE 11
FIGURE 4: SITE PLAN 14
FIGURE 5A: PHOTOGRAPHS OF THE PROJECT SITE 36
FIGURE 5B: PHOTOGRAPHS OF THE PROJECT SITE 37
FIGURE 6: 100 YEAR FEMA FLOOD ZONE 87

APPENDIX

APPENDIX A: AIR QUALITY AND GHG ANALYSIS REPORT A-1
APPENDIX B: ARBORIST REPORTS B-1
APPENDIX C: RESPONSE TO COMMENTS C-1
APPENDIX D: MITIGATION MONITORING AND REPORTING PROGRAM D-1

LIST OF ACRONYMS

AB	Assembly Bill
AQP	Air Quality Plan
ATCM	Airborne Toxic Control Measure
BAAQMD	Bay Area Air Quality Management District
BMPs	Best Management Practices
CAA	Clean Air Act
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CIDH	Cast in Drill Hole
CO	Carbon Monoxide
CWA	Federal Clean Water Act
dB	Decibel
dBA	A-weighted sound level
District	Santa Clara Valley Water District
DPM	Diesel Particulate Matter
DTSC	Department of Toxic Substances and Control
EPA	U.S. Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
GHGs	Greenhouse Gases
GP	NPDES General Permit
HCP	Habitat Conservation Plan
HSLA	Hazardous Substance Liability Assessment
LCP	Lake Cunningham Park
Ldn	Day-Night Average Sound Level
LOMR	Letter of Map Revision
IS	Initial Study
MBTA	Migratory Bird Treaty Act
MND	Mitigated Negative Declaration
MRP	San Francisco Bay Region Municipal Regional Stormwater NPDES Permit
MTCO	Metric Ton of Carbon Dioxide Equivalent Per Year
NAVD	North American Vertical Datum of 1988
NOx	Oxides of Nitrogen
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
OEHHA	Office of Health Hazard Assessment
PM_{10}	Fine particulate matter less than 10 micrometers
PM2.5	Fine particulate matter less than 2.5 micrometers
PRNS	City of San Jose Parks and Neighborhood Services Department
ROG	Reactive Organic Gases
RWQCB	Regional Water Quality Control Board
SAA	Streambed Alteration Agreement
SCE	State Candidate for listing as Endangered
SCVWD	Santa Clara Valley Water District
SSC	CDFW Species of Special Concern
TAC	Toxic Air Contaminants

TPZ	Traffic Pattern Zone
USFWS	United States Fish and Wildlife Service
VHP	Valley Habitat Plan
WDR	Waste Discharge Requirements

Key Terminology

Beneficial Impact: A project impact is considered beneficial if it would result in the enhancement or improvement of an existing physical condition in the environment – no mitigation is required when an impact is determined to be beneficial.

Best Management Practices: Measures typically derived from standardized District operating procedures. These practices have been identified as methods, activities, procedures, or other management practices for the avoidance or minimization of potential adverse environmental effects. They have been designed for routine incorporation into project designs and represent the "state of the art" impact prevention practices.

Less-than-significant Impact: This is indicated in the Initial Study checklist where the impact does not reach the standard of significance set for that factor and the project would therefore cause no substantial change in the environment (no mitigation needed).

Less-than-significant Impact with Mitigation*:* This is indicated in the Initial Study checklist where the impact is determined to exceed the applicable significance criteria, but for which feasible mitigation measure(s) are available to reduce the impact to a level of less-than-significant.

Mitigation Measures: Mitigation includes: (a) avoiding the impact altogether by not taking a certain action or parts of an action; (b) minimizing impacts by limiting the degree or magnitude of the action and its implementation; (c) rectifying the impact by repairing, rehabilitating, or restoring the impacted environment; (d) reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and (e) compensating for the impact by replacing or providing substitute resources or environments.[*]

No Impact: This is indicated in the Initial Study where, based on the environmental setting, the stated environmental factor does not apply to the proposed project.

Potentially Significant Impact: This is indicated in the Initial Study where the project impact may cause a substantial adverse change in the environment, but for which (1) no feasible mitigation is available to reduce the impact to a less-than-significant level, or (2) feasible mitigation has been identified but the residual impact remains significant after mitigation is applied.

Significance Criteria: A set of criteria used by the lead agency to determine whether an impact would be considered significant. The District relied upon the significance criteria set forth in the CEQA Guidelines and criteria based on the regulatory standards of local, state and federal agencies.

[*] Authority cited: Sections 21083 and 21087, Public Resources Code; Reference: Sections 21002, 21002.1, 21081, and 21100(c), Public Resources Code.

SECTION 1: INTRODUCTION

Organization of This Document

This document is organized to assist the reader in understanding the potential impacts that the proposed project may have on the environment and to fulfill the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code Section 21000 et seq.). Section 1 indicates the purpose under CEQA, sets forth the public participation process, and summarizes applicable state and federal regulatory requirements. Section 2 describes the location as well as features of the proposed plan and Section 3 describes the environmental setting. Section 4 evaluates the potential impacts through the application of the CEQA Initial Study Checklist questions to project implementation. Section 5 lists the contributors, and Section 6 supplies the references used in its preparation. The air quality and greenhouse gas report is located in Appendix A and the arborists reports are located in Appendix B. Responses to public comments received during the 30-day public review period are provided in Appendix C, and a Mitigation Monitoring and Reporting Program summary table is provided in Appendix D.

Purpose of the Initial Study

The Santa Clara Valley Water District (District), acting as the Lead Agency under CEQA, prepared this Initial Study (IS) and Mitigated Negative Declaration (MND) to provide the public, responsible agencies and trustee agencies with information about the potential environmental effects of the Cunningham Flood Detention Facility Certification Project (hereinafter "proposed project").

This Mitigated Negative Declaration was prepared consistent with CEQA, the CEQA Guidelines (Title 14 Code of Regulations 15000 et seq.), and District procedures for implementation of CEQA (Environmental Planning Guidance Q520D01 and W520M01). CEQA requires that public agencies such as the District identify significant adverse environmental effects from their discretionary actions and mitigate those adverse effects through feasible mitigation measures or through selection of feasible alternatives.

In addition to acting as the CEQA Lead Agency for its projects, the District's mission includes objectives to conduct its activities in an environmentally sensitive manner as a steward of Santa Clara Basin watersheds. The District strives to preserve the natural qualities, scenic beauty and recreational uses of Santa Clara Valley's waterways by using methods that reflect an ongoing commitment to conserving the environment. This MND is intended to allow the public to fully understand the environmental consequences of the proposed project, the significance of those consequences, feasible measures to reduce or eliminate project impacts, and the effectiveness of those measures.

Decision to Prepare a Mitigated Negative Declaration

The Initial Study (Section 4) for the proposed project indicates that the proposed project could result in significant environmental impacts, but those impacts would be reduced to less than significant level through application of feasible mitigation measures. Implementation of the proposed project would not result in significant impacts to the environment after implementation of mitigation measures identified herein. A Mitigated Negative Declaration is consistent with CEQA Guidelines §15070, which indicates that a Mitigated Negative Declaration is appropriate when:

a) Revisions to the project plan are made that would avoid, or reduce the effects to a point where clearly no significant effects would occur, and

b) There is no substantial evidence that the project, as revised, may have a significant effect on the environment.

Public Review Process

This IS/MND will be circulated to local, state and federal agencies, interested organizations and individuals who may wish to review and provide comments on the project description, the proposed mitigation measures or other aspects of the report. The publication commenced a minimum 30-day public review period consistent with CEQA Guidelines §15105(b) ~~beginning~~ began on ~~June 28~~ July 20, 2017 and ~~ending~~ ended on ~~July 28~~ August 21, 2017.

The draft IS/MND and all supporting documents ~~are~~ were available for review at:

- Santa Clara Valley Water District
  5750 Almaden Expressway
  San Jose, CA 95118

- At the local library reference desks:
  San Jose Public Library
  Evergreen Branch Library
  2635 Aborn Road
  San Jose, CA 95121

  San Jose Public Library
  Hillview Branch Library
  1600 Hopkins Drive
  San Jose, CA 95122

- Posted on the District website: www.valleywater.org, or

- Via written request for a copy from the District.

Written comments or questions regarding the draft IS/MND ~~should be~~ were submitted to:

Tim Tidwell
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose, CA 95118-3614
e-mail: ttidwell@valleywater.org

~~Submittal of written comments via e-mail will greatly facilitate the response process.~~ The District ~~will~~ considered all comments and ~~make~~ made ~~any~~ necessary changes to the document prior to adopting the final IS/MND and approving the project.

Interagency Collaboration and Regulatory Review

The CEQA review process is intended to provide both trustee and responsible agencies with an opportunity to provide input into the project. Trustee agencies are agencies having jurisdiction

by law over natural resources affected by a project which are held in trust for the state. Responsible agencies are those agencies, other than the lead agency, that have some responsibility or authority for carrying out or approving a project; in many instances these public agencies must make a discretionary decision to issue a permit; provide right-of-way, funding or resources to the project. In this instance the California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB), San Francisco Bay Regional Water Quality Control Board (RWQCB), Santa Clara Valley Habitat Agency, and the City of San Jose would be considered responsible agencies. The District will work with CDFW, SWRCB, RWQCB, Santa Clara Valley Habitat Agency, and City of San Jose to ensure that the proposed project meets applicable policies and requirements.

This IS/MND is intended to assist state and local agencies to carry out their responsibilities for permit review or approval authority over the proposed project. Implementation of the proposed project would likely require specific permitting as summarized in Table 1.1: Summary of Agency Approvals below.

Table 1.1: **Summary of Agency Approvals**

Agency	Permit/Review Required
CDFW	Fish and Game Code §1602 Lake and Streambed Alteration Agreement (LSAA)
SWRCB	NPDES General Construction Permit
RWQCB	Waste Discharge Requirements (WDR)
Santa Clara Valley Habitat Agency	Santa Clara Valley Habitat Plan Reporting Form for Public Projects
City of San Jose	Traffic Control Permit for Lane Closure on Cunningham Avenue and South White Road

SECTION 2: PROJECT DESCRIPTION

Project Objectives

Lower Silver Creek flows from south to north through Lake Cunningham Park (LCP or Park) in San Jose, CA. Flint and Ruby Creeks are tributary streams rising in the hills east of the park and flowing westward to the eastern portion of LCP, then join together and empty into Lower Silver Creek within the park. Lower Silver Creek carries the combined flows from all three creeks northwards out of the Park to its confluence with Coyote Creek, located about 4.2 miles downstream from the LCP. During high flows, Lower Silver Creek and Flint Creek overtop weirs located within LCP and are temporarily stored within LCP, which was designed and constructed in the late 1970s and early 1980s to serve as both a detention basin for overflow water from Lower Silver, Flint, and Ruby creeks and a recreational facility. The storage of water at LCP reduces the flows of Lower Silver Creek downstream of LCP.

To reduce flow hazards to urbanized areas along Lower Silver Creek downstream of LCP, the District reconstructed the channel of Lower Silver Creek between LCP and Coyote Creek confluence between 2005 and 2016. The reconstructed channel has a design flow conveyance capacity of 2,810 cubic feet per second (cfs) at the Cunningham Avenue Bridge crossing (i.e. the upstream terminus of the Lower Silver Creek Flood Protection Project). Flows greater than 2,816~~0~~ cfs would cause Lower Silver Creek to overflow its banks downstream of LCP and

flood nearby urbanized areas. Thus, 1% flow of Lower Silver Creek downstream of LCP must be reduced to 2,816~~0~~ cfs to prevent flooding of urbanized areas along the creek.

The typical water surface elevation of Lake Cunningham within LCP is 124 feet above mean sea level (MSL). During the 1% flow event, the lake surface elevation would rise to 132.75 feet MSL and about 1,000 acre-feet of water would be detained at LCP. This water would be released back to Lower Silver Creek after the peak flows pass and the lake level would drop back to 124 feet MSL, which would take about six days.

The Federal Emergency Management Agency (FEMA) requires that flood protection levees and floodwalls have three feet of freeboard (the vertical distance between water surface elevation during the 1% event and the top of the levee or floodwall) to provide a margin of safety. In their current condition, the levees and berms along the northern and western boundary of LCP can detain the amount of water required to prevent downstream flooding of Lower Silver Creek, but are too low in elevation to provide the FEMA -required three feet of freeboard. The proposed project would ensure flood detention capability of LCP and provide the FEMA required three feet of freeboard. Specific objectives of the proposed project are:

1. Ensure that the flood detention facility at LCP continues to function as a joint recreational and flood detention facility.

2. Ensure that the park's capacity to store floodwater is consistent with the 1978 planned floodwater surface elevation.

3. Ensure that the flow released from LCP to Lower Silver Creek downstream of Cunningham Avenue can be safely conveyed with adequate freeboard so that the Lower Silver Creek Flood Protection Project can be certified by FEMA.

4. Ensure the flood detention facility can be certified by FEMA.

5. Ensure the flood detention facility's Division Safety of Dams jurisdictional status remains non-jurisdictional.[1]

6. Support a Letter of Map Revision (LOMR) package for both the flood detention facility and the Lower Silver Creek Flood Protection Project to be submitted to FEMA to revise the applicable flood insurance rate maps.

Project Overview

The proposed project would consist of several elements:

1. Increasing the crest elevation of about 3,200 linear feet (LF) of existing earthen levee on the western/northern banks of Lower Silver Creek as it flows through LCP.
2. Constructing about 1,300 LF of new concrete floodwall with a height up to 3 feet between the Flint Creek channel and the northern park boundary adjacent to Cunningham Avenue. Short sections of floodwall adjacent to the Cunningham Avenue Bridge over Lower Silver Creek, and the pedestrian bridge over Flint Creek would be up to 4 feet in height.

[1] Currently the Cunningham Detention Facility does not meet State definition of a dam and is not subject to regulation by the Division of Dam Safety. It is beneficial to the District and City of San Jose to maintain that status in the future.

3. In-kind replacement of the existing chain-link fence along the Cunningham Avenue park frontage.
4. Relocating an existing trash compactor and green waste collection area about 1,500 feet southward from the northeastern corner of LCP to an undeveloped grassy area south of the Ruby Creek outfall. An electrical conduit would be installed along an existing concrete path from South White Road to provide power to the trash compactor.
5. Removing concrete slabs at the existing trash compactor and green waste collection area and constructing a new pedestrian path to the intersection of South White Road/Cunningham Avenue.
6. Regrading approximately 70 feet of trails near the Lake Cunningham shoreline to drain high water from Lake Cunningham (preventing water level in the lake from rising above design levels) during flood conditions to an existing 36-inch diameter storm drain discharging to Lower Silver Creek.

Project Location

The project site is located in the Lower Silver Creek Watershed, which is a portion of the larger Coyote Creek watershed. The project site is located within LCP, which is a 202-acre water-oriented park, in the southeast section of the City of San Jose. LCP is owned and operated by the City of San Jose Department of Neighborhood Services, Parks, and Recreation. LCP is bordered on the west by Capitol Expressway, to the north by Cunningham Avenue, on the east by South White Road, and on the south by Tully Road. LCP and is located upstream of the District's Lower Silver Creek Flood Protection Project. A regional vicinity map is shown in Figure 1: Regional Location Map. A map of the project vicinity is shown in Figure 2: Project Vicinity Map.

The Lower Silver Creek Watershed encompasses an area of approximately 44 square miles and is in turn a sub-basin of the Coyote Watershed which drains most of the west-facing slope of the Diablo Range. Lower Silver Creek flows northward from the Diablo hills adjacent to the southeastern portion of San Jose to LCP. After crossing the southern LCP boundary near Tully Road, it flows northward along the western and northern perimeter of the park. Near the middle of the northern park boundary, Flint Creek discharges into Lower Silver Creek, and the combined creeks flow under Cunningham Avenue and continue northward. Lower Silver Creek empties into Coyote Creek near US-101 freeway/McKee Road interchange.

The Lower Silver Creek Watershed is approximately five miles wide at its downstream end and narrows to a width of about one mile at its upstream end. The upper portion of the watershed is located in steep foothills while the lower portion is nearly flat. The upper portion has remained relatively undeveloped (i.e., rangelands to wildlife habitat) and the flatter area, about one-third of the watershed, is almost completely urbanized (i.e., residential and commercial uses.)

Land uses surrounding LCP include: single family residential homes to the north and south; a car dealership to the southwest; the Reid-Hillview Airport to the west and a fallow field that was a former golf course to the east. Uses within the LCP include a water park (Raging Waters), open space areas, a marina, picnic areas, a skate park, and a bicycle park.

Existing Conditions

The project site is located along Lower Silver, Flint, and Ruby creeks at the eastern, northern, and western periphery of LCP. Lower Silver Creek in the western and northern portion of the

LCP is contained by a man-made earthen levee adjacent to the Capitol Expressway and Cunningham Avenue frontages of LCP. Dense riparian vegetation grows in the creek corridor; however, the levee itself is sparsely vegetated with low ground cover. Flint and Ruby Creeks flow through a relatively densely vegetated riparian corridor adjacent to the northern and western boundaries of the park. Additionally, an existing trash compactor and green waste collection area are located in the northeastern portion of the park (near the intersection of Cunningham Avenue and South White Road). The existing trash compactor and green waste collection area are accessible by a paved combined driveway/pedestrian path connecting to Cunningham Avenue.

The majority of the riparian corridor in the eastern portion of the project site along the north bank of Flint Creek is dominated by non-native trees with a manicured understory (mowed or treated), while the riparian corridor in the western portion of the project site along Lower Silver Creek is comprised of dense stands intermixed with non-native trees with canopy gaps. Ruby Creek enters LCP as an underground channel and transitions into an earthen channel in the eastern portion of the project site. The Ruby Creek riparian corridor is primarily comprised of non-native trees and a manicured understory.

The proposed location for relocation of the trash compactor and green waste collection area is within LCP and is located south of the Ruby Creek outfall in the eastern ~~southwestern~~ portion of the park, about 600 feet south of the South White Road park entrance. The relocation site is adjacent to the existing Park Road, which will provide vehicle access to and egress from the site. The site is undeveloped and vegetated with grass and low ground cover.

The project site is located upstream of Reach 6 of the District's Lower Silver Creek Flood Protection Project. The boundary of LCP is secured by a chain-link fence. Photographs of existing conditions at the proposed locations for project elements are shown in Figures 3a – 3c: Photographs of the Project Site.

The existing levee along Lower Silver Creek is approximately 12 and 20 feet high with side slopes ranging from 2.5 horizontal to 1 vertical (2.5H:1V) to 4H:1V. The levee is predominately vegetated with grass, has roads surfaced with crushed rock on the levee crest, and has lower roads along the inboard toe of the levee.

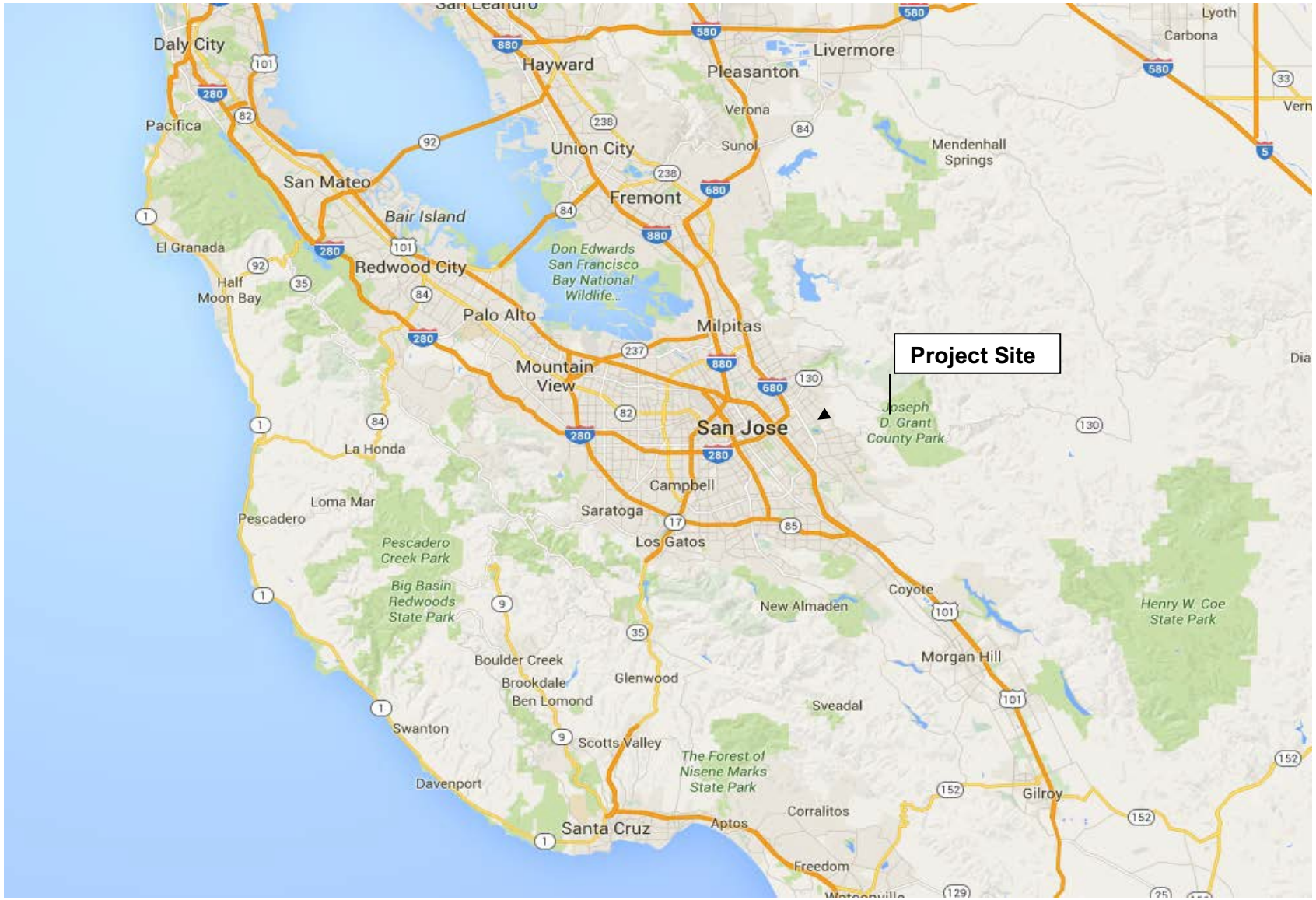


Figure 1: Regional Location Map

Figure 2: Project Vicinity Map

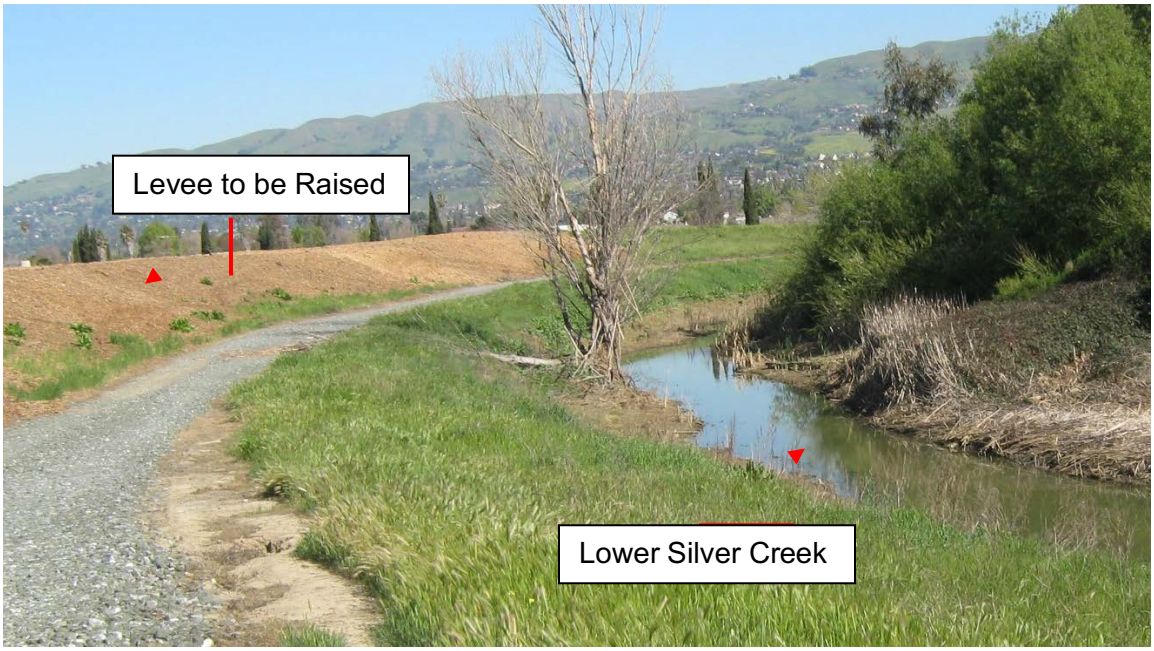


Photo 1. View of Lower Silver Creek levee to be raised.

Photo 2. Proposed location of floodwall between Cunningham Avenue and Flint Creek Channel.

Figure 3a: Photographs of the Project Site

Photo 3: Park Entrance at Cunningham Avenue and Trash Compactor to be relocated.

Photo 4: Proposed Site for New Park Entrance and Pedestrian Path.

Figure 3b: Photographs of the Project Site

Photo 5. Proposed site for Relocation of the Trash Compactor and Green Waste Collection Area.

Photo 6. Proposed location for trail regrading.

Figure 3c: Photographs of the Project Site

Project Background

The District entered into a Joint Use Agreement (1978 Agreement) with the City of San Jose (City) in 1978 to develop a joint recreational-flood detention facility at the LCP. The City holds fee title to all the park lands and per the 1978 Agreement, is responsible for the park's recreational-related facilities including Lake Cunningham. The City granted the District an easement to all park lands and the District is responsible for maintaining the flood protection infrastructure in LCP which include the creeks, levees, and overflow weirs. The easement, recorded in October of 1980, includes language that allows for the District to take measures necessary for flood protection purposes provided the measures are compatible with the park uses.

The City was the lead agency responsible for the design and construction of the improvements in the late 1970s and early 1980s and the District assisted by providing design input and funds towards the construction of the Park. The Park serves as both a recreation and flood detention facility to provide temporary storage of overflow waters from Lower Silver Creek, Flint Creek, and Ruby Creek.

Project Planning Phase

The District completed a planning study to determine the existing flood detention facility's floodwater storage capacity to ensure that the flow released into Lower Silver Creek downstream (north) of Cunningham Avenue could be safely conveyed with adequate freeboard. The planning study identified flood improvement measures to ensure the Lower Silver Creek's project's design flow parameters are met[1]. The identified flood improvement measures include: raising the existing levee along Lower Silver Creek and constructing a floodwall along Flint Creek to ensure the flood detention facility can be certified by the Federal Emergency Management Agency (FEMA) and regrading trails near the Lake Cunningham shoreline to direct overflow water from the lake to an existing storm drain discharging to Lower Silver Creek.

Project Elements

The proposed project would construct improvements at LCP to ensure that the flood control facility ~~lake~~ has ~~capacity to~~ sufficient ~~volume~~ capacity to detain stormwater to meet design flow of Lower Silver Creek downstream from the project. Temporary detention of stormwater at LCP would limit the 1% flow, which has an average recurrence interval of 100 years, to about 2,810 cfs, which is the design capacity of Lower Silver Creek downstream of the project area. Proposed flood improvement measures are described below and shown in Figure 4: Site Plan.

Raising the Lower Silver Creek Levee

The proposed project includes increasing the crest height of the exterior levee along Lower Silver Creek (i.e. the levee on the Capitol Expressway and Cunningham Avenue side of the creek) up to 3 feet to an elevation of 136.2 feet North American Vertical Datum 1988 (NAVD). The levee would be raised up to 4 feet in the areas adjacent to the Cunningham Avenue Bridge over Lower Silver Creek, and the vehicular bridge over Lower Silver Creek. The raised levee would contain the 1% flow of Lower Silver Creek with three feet of freeboard (i.e. vertical distance between projected 1% water surface elevation and levee crest elevation). The

[1] The portion of the Lower Silver Creek Flood Protection Project located downstream of LCP is currently under construction and will provide flood protection for the 100-year flood event.

freeboard would provide an additional margin of safety and is required by FEMA. The District would add clean fill to the levee, compact the fill to meet design standards, and hydroseed the levee slopes with native/naturalized grass seed mix. The side slopes of the levee would have a minimum slope gradient of 2:1 (horizontal:vertical). The levee crest would continue to support a road with a minimum width of ten feet. The road would be surfaced with compacted aggregate. The District would also regrade the approach to the park's existing vehicular bridge crossing Lower Silver Creek to maintain access to the levee crest road. The bridge would not be modified.

Floodwall

The proposed project includes construction of a concrete floodwall along the alignment of the existing berm adjacent to Flint Creek in the northeastern portion of LCP. The floodwall would extend from the Cunningham Avenue Bridge to South White Road. The existing ground surface elevation along the berm varies between 132.5 feet and 135 feet (stations 0+50 and 12+50 of Flint Creek) NAVD. The maximum anticipated height of the floodwall is approximately 3 feet above the existing ground surface except for the areas adjacent to the Cunningham Avenue Bridge over Lower Silver Creek, and the pedestrian bridge over Flint Creek, where the floodwall height would increase up to 4 feet. The top of the floodwall would be at elevation 136.2 feet. The proposed floodwall would be supported by cast in drill hole (CIDH) piles. The excavated soil will be reused on the site for backfill.

Fencing

The Park's existing chain-link fence along Cunningham Avenue would be replaced with chain-link fencing of the same type and function. About 1,500 ~~4,200~~ LF of new fencing would be installed.

Relocation of Trash Compactor and Green Waste Collection Area.

The proposed project would require relocation of the City's garbage compactor, nearby green waste collection area, and constructing a new pedestrian path and park entrance located in LCP near the corner of Cunningham Avenue and South White Road. The pedestrian path also currently serves as a truck access route to the trash compactor while removable bollards exclude path use by non-authorized vehicles. Several trucks per day deliver or remove trash from the compactor area. The proposed floodwall would cross the pedestrian trail / truck access route and make it unusable. A new pedestrian entrance would be constructed along South White Road. A new roughly ~~80-foot~~ 200-foot long asphalt pedestrian path would be constructed between the new park entrance and the existing bridge crossing Flint Creek.

The proposed project would relocate the trash compactor about 1,500 feet southward within the park to an undeveloped area near the parks existing skate park and maintenance area. The proposed relocation site is located to the south of the Ruby Creek outfall and outside of the riparian corridor. A new electrical conduit would be installed along an existing concrete path to connect to an existing electrical line along South White Road and provide electrical power to the trash compactor.

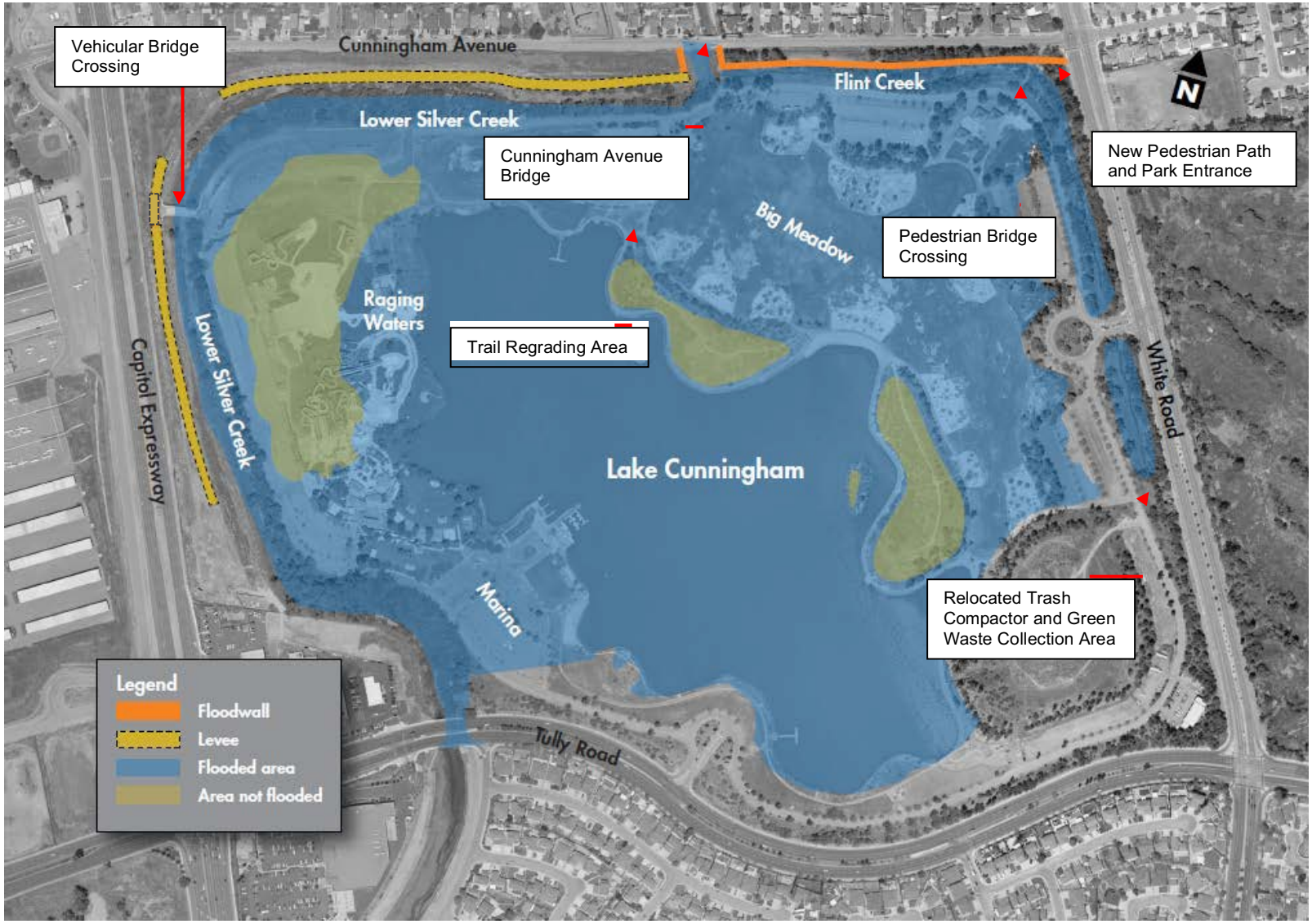


Figure 4: Site Plan

Trail Regrading

The proposed project includes regrading an approximately 70-foot wide area of trails between the northern shoreline of Lake Cunningham and the Big Meadow to control the water surface elevation in the lake during storm events. When the water level in the lake exceeds elevation 124 feet, which is anticipated to occur once every 10 to 25 years, overflow water would be conveyed into the Big Meadow. This water surface elevation is the maximum elevation needed to detain the required volume of water to prevent downstream flooding of Lower Silver Creek.

Construction Activities

The proposed project includes the clearing and grubbing of approximately 4 acres of land and the removal of approximately 91 trees. The proposed project would require grading to provide the required soil conditions for construction of the raised levee, new concrete floodwall, new pedestrian path connecting to South White Road, and new concrete pad for the relocated trash compactor/green waste collection area. Materials needed for the project construction would be brought in by haul trucks. Below are some key assumptions used to analyze environmental impacts of the proposed project's construction activities:

- *Raised Levee* - Construction of the proposed levee improvements would consist of clearing and grubbing, excavating to remove deleterious materials, placing and compacting fill material for the levee, and re-constructing a maintenance road on top of the levee. For construction of the levee, the proposed project would require the excavation of 4,150 cubic yards of soil and the fill of 12,240 cubic yards of soil. Access for construction of the levee would occur west of the Cunningham Avenue bridge from the proposed staging area.

- *Concrete Floodwall* - Construction of the proposed floodwall would require the drilling of holes and casting in place of concrete piles, followed by form work installation; concrete pouring; backfilling; and aesthetic texturing on the face of the wall. The floodwall would require the excavation and backfill of approximately 1,750 cubic yards of soil; the import of 1,170 cubic yards of base material; and 648 cubic yards of concrete. Access for construction of the floodwall would occur from Cunningham Avenue and would include a concrete truck with a boom to form the floodwall in place.

- *Relocated Trash Compactor and Green Waste Collection Area* – At the northeast corner of LCP, the existing trash collector, green waste collection area, roughly 2,000 square feet of concrete pads, and existing driveway connecting to Cunningham Avenue would be removed. A new trash collector and green waste collection area would be built near the South White Road frontage about 600 feet south of the South White Road entrance to LCP. About 2,000 square feet (0.05 acre) of concrete pad would be poured at this area. About 150 CYs of fill would be placed to level the site. An electrical conduit would be installed along an existing concrete path from South White Road to provide power to the trash compactor.

- *Regraded Trail Area* – Approximately 70 feet of trails between the lake shoreline and the Big Meadow would be lowered below an elevation of 124 feet in order to convey stormflows. After construction is completed, the disturbed areas would be seeded with native grasses/forbs to re-establish vegetative cover.

Construction Phasing and Days/Hours of Operation

Construction of the proposed project, which includes site preparation, is estimated to begin January 2018 and conclude by December 2018. The proposed construction schedule is shown in Table 2.1. Construction activities would occur from 7:00 AM to 7:00 PM, Monday through Friday and 8:00 AM to 5:00 PM on Saturday, as needed. Activities would vary each day based on the type of operation. No holiday construction is planned.

Table 2.1: Construction Schedule

Construction Phase	Construction Schedule		Approximate Working Days
	Start Date	End Date	
Site Preparation	1/1/2018	1/12/2018	10
Grading	1/13/2018	2/9/2018	20
Levee Construction	2/10/2018	12/31/2018	231
Floodwall Construction	4/2/2018	10/26/2018	150
Paving	10/29/18	11/23/2018	20

Staging Areas

Staging of the reconstruction of the levee and floodwall would occur at two locations within LCP. One staging area would be located atop the levee crest in the western portion of the project site near the intersection of Capitol Expressway and Cunningham Avenue. An additional staging area would be located to the west of the Cunningham Avenue bridge at the confluence of Lower Silver Creek with Flint Creek with access provided along Cunningham Avenue.

Construction Workers, Equipment and Supplies

Table 2.2: Construction Off-site Trips shows the number of worker and vendor trips during each phase of construction. The proposed project would include a maximum of 23 worker trips and 24 vendor trips per day during the grading phase.

Table 2.2: Construction Off-site Trips

Activity	Worker Trips Per Day	Vendor Trips Per Day
Site Preparation	15	12
Grading	23	24
Levee Construction	8	4
Floodwall Construction	4	14
Paving	15	0

Worker and vendor trips during site preparation, levee and floodwall construction, and paving activities would be less compared to those during the grading phase, but haul trips would be more. A summary of the proposed haul trips is provided in Table 2.3: Construction Haul Trips. Haul trips were determined based on the total amount of excavation and backfill needed for construction of the proposed project, as well as the assumption that an average truck can handle 16 cubic yards of material per load. No haul trips would be associated with the site preparation, grading, and paving construction phases.

Table 2.3: Construction Haul Trips

Activity	Quantity
Levee Construction	
Excavation	4,150 cubic yards
Backfill	12,240 cubic yards
Total Cubic Yards	16,390 cubic yards
Total One-Way Haul Trips	1,025 haul trips
Total Trips (One Trip Each Way)	2,050 haul trips
Approximate Haul Trips Per Day	9 haul trips
Floodwall Construction (Including bridge transition)	
Floodwall Base Material	195 cubic yards
Bridge Transition Wall Base Material	13 cubic yards
Total Cubic Yards	208 cubic yards
Total One-Way Haul Trips	13 haul trips
Total Trips (One Trip Each Way)	26 haul trips
Approximate Haul Trips Per Day	1 haul trip
Note: Total number of haul trips is based on a 16-cubic yard capacity dump truck	

Proposed construction equipment and proposed usage hours per day is shown in Table 2.4: Proposed Construction Equipment.

Table 2.4: Proposed Construction Equipment

Phase Name	Equipment Type	Equipment Amount	Usage Hours Per Day
Site Preparation	Excavators	1	8
	Graders	1	1
	Off-Highway Trucks	1	8
	Skid Steer Loaders	1	8
	Sweepers/Scrubbers	1	8
	Tractors/Loaders/Backhoes	1	8
Grading	Excavators	2	8

	Graders	1	8
	Off Highway Trucks	1	8
	Sweepers/Scrubbers	1	1
	Tractors/Loaders/Backhoes	4	8
Levee Construction	Excavators	1	8
	Graders	1	8
	Off Highway Trucks	1	8
	Rollers	2	8
	Tractors/Loaders/Backhoes	2	7
Floodwall Construction	Bore/Drill Rigs	1	8
	Cranes	1	7
	Off-Highway Trucks	1	8
	Skid Steer Loaders	1	8
Paving	Paver	2	8
	Paving Equipment	2	8
	Roller	2	8

Haul Routes

The proposed haul routes would be Cunningham Avenue, Capitol Expressway, and Highway 680 to the Zanker Road Landfill.

Site Restoration

Site restoration would include repaving the trails near the Lake Cunningham shoreline, repairing any damaged street or sidewalk features, and installing replacement landscaping in accordance with the District's nursery contract specifications. The landscaping, would be installed consistent with the surrounding neighborhood and City standards.

Best Management Practices

Best Management Practices (BMPs) are standard operating procedures to prevent, avoid, or minimize effects associated with construction and other activities. The District routinely incorporates a wide range of BMPs into project design and construction as described in detail in its Best Management Practices Handbook (District 2014). The proposed project would include the applicable District BMPs, which are summarized in Table 2.5.

Santa Clara Valley Habitat Plan

The proposed project is a covered activity in the *Santa Clara Valley Habitat Plan* (VHP), which is a joint habitat conservation plan and natural communities conservation plan developed to serve as the basis for the issuance of incidental take permits and authorizations pursuant to Section 10 of the federal Endangered Species Act and the California Natural Community

Conservation Planning Act.[1] Thus, all activities associated with the proposed project must be implemented consistent with the requirements outlined in the VHP. Chapter 6 of the VHP describes conditions that help meet avoidance and minimization goals at a regional level. The conditions on covered activities are designed to minimize adverse effects on natural communities and covered species and the VHP represents a comprehensive approach for the protection of natural resources, including endangered species. Compliance with these regional avoidance and minimization measures reduces the need for individual projects to avoid and minimize impacts at the project scale and allows streamlining of regulatory requirements. The proposed project would be subject to Conditions 1, 3, 15, and 17, described in Table 2.5. Conditions 15 and 17 contain avoidance and minimization measures applicable to specific protected species. Those measures are described in detail in section 4 Biological Resources of this document.

[1] The impacts associated with the VHP's covered activities were previously evaluated at a programmatic level in the VHP Final Environmental Impact Report/Environmental Impact Statement (County of Santa Clara et. al 2012).

Table 2.5: Best Management Practices and Santa Clara Valley Habitat Plan Conditions Incorporated Into the Proposed Project		
BEST MANAGEMENT PRACTICES		
Number	**Title**	**Description**
Air Quality		
AQ-1	Use Dust Control Measures	The following Bay Area Air Quality Management District (BAAQMD) Dust Control Measures will be implemented: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day; 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered; 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited; 4. Water used to wash the various exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, etc.) will not be allowed to enter waterways; 5. All vehicle speeds on unpaved roads shall be limited to 15 mph; 6. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building pads shall be laid as soon as possible after grading unless seeding or soil binders are used; 7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations), and this requirement shall be clearly communicated to construction workers (such as verbiage in contracts and clear signage at all access points); 8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer‘s specifications, and all equipment shall be checked by a certified visible emissions evaluator; 9. Correct tire inflation shall be maintained in accordance with manufacturer‘s specifications on wheeled equipment and vehicles to prevent excessive rolling resistance; and, 10. Post a publicly visible sign with a telephone number and contact person at the lead agency to address dust complaints; any complaints shall be responded to and take corrective action within 48 hours. In addition, a BAAQMD telephone number with any applicable regulations will be included.

AQ-2	Avoid Stockpiling Odorous Materials	Materials with decaying organic material, or other potentially odorous materials, will be handled in a manner that avoids impacting residential areas and other sensitive receptors, including: 1. Avoid stockpiling potentially odorous materials within 1,000 feet of residential areas or other odor sensitive land uses; and 2. Odorous stockpiles will be disposed of at an appropriate landfill.
Biological Resources		
BI-5	Avoid Impacts to Nesting Migratory Birds	Nesting birds are protected by state and federal laws. The District will protect nesting birds and their nests from abandonment, loss, damage, or destruction. Nesting bird surveys will be performed by a qualified biologist prior to any activity that could result in the abandonment, loss, damage, or destruction of birds, bird nests, or nesting migratory birds. Inactive bird nests may be removed with the exception of raptor nests. Birds, nests with eggs, or nests with hatchlings will be left undisturbed.
BI-8	Choose Local Ecotypes Of Native Plants and Appropriate Erosion-Control Seed Mixes	Whenever native species are prescribed for installation the following steps will be taken by a qualified biologist or vegetation specialist: 1. Evaluate whether the plant species currently grows wild in Santa Clara County; and, 2. If so, the qualified biologist or vegetation specialist will determine if any need to be local natives, i.e. grown from propagules collected in the same or adjacent watershed, and as close to the project site as feasible. Also, consult a qualified biologist or vegetation specialist to determine which seeding option is ecologically appropriate and effective, specifically: 1. For areas that are disturbed, an erosion control seed mix may be used consistent with the SCVWD Guidelines and Standards *for Land Use Near Streams, Design Guide 5, 'Temporary Erosion Control Options.'* 2. In areas with remnant native plants, the qualified biologist or vegetation specialist may choose an abiotic application instead, such as an erosion control blanket or seedless hydro-mulch and tackifier to facilitate passive revegetation of local native species. 3. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable. 4. If a gravel or wood mulch has been used to prevent soil compaction per BI-11, this material may be left in place [if ecologically appropriate] instead of seeding.

		Seed selection shall be ecologically appropriate as determined by a qualified biologist, per *Guidelines and Standards for Land Use Near Streams, Design Guide 2: Use of Local Native Species*.
BI-10	Avoid Animal Entry and Entrapment	All pipes, hoses, or similar structures less than 12 inches diameter will be closed or covered to prevent animal entry. All construction pipes, culverts, or similar structures, greater than 2-inches diameter, stored at a construction site overnight, will be inspected thoroughly for wildlife by a qualified biologist or properly trained construction personnel before the pipe is buried, capped, used, or moved. If inspection indicates presence of sensitive or state- or federally-listed species inside stored materials or equipment, work on those materials will cease until a qualified biologist determines the appropriate course of action. To prevent entrapment of animals, all excavations, steep-walled holes or trenches more than 6-inches deep will be secured against animal entry at the close of each day. Any of the following measures may be employed, depending on the size of the hole and method feasibility: 1. Hole to be securely covered (no gaps) with plywood, or similar materials, at the close of each working day, or any time the opening will be left unattended for more than one hour; or 2. In the absence of covers, the excavation will be provided with escape ramps constructed of earth or untreated wood, sloped no steeper than 2:1, and located no farther than 15 feet apart; or 3. In situations where escape ramps are infeasible, the hole or trench will be surrounded by filter fabric fencing or a similar barrier with the bottom edge buried to prevent entry.
BI-11	Minimize Predator-Attraction	Remove trash daily from the worksite to avoid attracting potential predators to the site.
Hazards and Hazardous Materials		
HM-7	Restrict Vehicle and Equipment Cleaning to Appropriate Locations	Vehicles and equipment may be washed only at approved areas. No washing of vehicles or equipment will occur at job sites.
HM-8	Ensure Proper Vehicle and Equipment Fueling and Maintenanc	No fueling or servicing will be done in a waterway or immediate flood plain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators). 1. For stationary equipment that must be fueled or serviced on-site, containment will be provided in such a manner that any accidental spill will not be able to come in direct contact with soil, surface water, or the storm drainage system. 2. All fueling or servicing done at the job site will provide containment to the degree that any spill will be unable to enter any waterway or damage riparian vegetation.

		3. All vehicles and equipment will be kept clean. Excessive build-up of oil and grease will be prevented. 4. All equipment used in the creek channel will be inspected for leaks each day prior to initiation of work. Maintenance, repairs, or other necessary actions will be taken to prevent or repair leaks, prior to use. 5. If emergency repairs are required in the field, only those repairs necessary to move equipment to a more secure location will be done in a channel or flood plain.
HM-9	Ensure Proper Hazardous Materials Management	Measures will be implemented to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means. 1. Prior to entering the work site, all field personnel will know how to respond when toxic materials are discovered. 2. Contact of chemicals with precipitation will be minimized by storing chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage. 3. Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials will not contact soil and not be allowed to enter surface waters or the storm drainage system. 4. All toxic materials, including waste disposal containers, will be covered when they are not in use, and located as far away as possible from a direct connection to the storm drainage system or surface water. 5. Quantities of toxic materials, such as equipment fuels and lubricants, will be stored with secondary containment that is capable of containing 110% of the primary container(s). 6. The discharge of any hazardous or non-hazardous waste as defined in Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations will be conducted in accordance with applicable State and federal regulations. 7. In the event of any hazardous material emergencies or spills, personnel will call the Chemical Emergencies/Spills Hotline at 1-800-510-5151.
HM-10	Utilize Spill Prevention Measures	Prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water following these measures: 1. Field personnel will be appropriately trained in spill prevention, hazardous material control, and clean up of accidental spills; 2. Equipment and materials for cleanup of spills will be available on site, and spills and leaks will be cleaned up immediately and disposed of according to applicable regulatory requirements; 3. Field personnel will ensure that hazardous materials are properly handled and natural resources are protected by all reasonable means;

		4. Spill prevention kits will always be in close proximity when using hazardous materials (e.g., at crew trucks and other logical locations), and all field personnel will be advised of these locations; and, 5. The work site will be routinely inspected to verify that spill prevention and response measures are properly implemented and maintained.
Hydrology and Water Quality		
WQ-4	Limit Impacts From Staging and Stockpiling Materials	1. To protect on-site vegetation and water quality, staging areas should occur on access roads, surface streets, or other disturbed areas that are already compacted and only support ruderal vegetation. Similarly, all equipment and materials (e.g., road rock and project spoil) will be contained within the existing service roads, paved roads, or other pre-determined staging areas. 2. Building materials and other project-related materials, including chemicals and sediment, will not be stockpiled or stored where they could spill into water bodies or storm drains. 3. No runoff from the staging areas may be allowed to enter water ways, including the creek channel or storm drains, without being subjected to adequate filtration (e.g., vegetated buffer, swale, hay wattles or bales, silt screens). 4. The discharge of decant water to water ways from any on-site temporary sediment stockpile or storage areas is prohibited. 5. During the wet season, no stockpiled soils will remain exposed, unless surrounded by properly installed and maintained silt fencing or other means of erosion control. During the dry season; exposed, dry stockpiles will be watered, enclosed, covered, or sprayed with non-toxic soil stabilizers.
WQ-5	Stabilize Construction Entrances and Exits	Measures will be implemented to minimize soil from being tracked onto streets near work sites: 1. Methods used to prevent mud from being tracked out of work sites onto roadways include installing a layer of geotextile mat, followed by a 4-inch thick layer of 1 to 3-inch diameter gravel on unsurfaced access roads. 2. Access will be provided as close to the work area as possible, using existing ramps where available and planning work site access so as to minimize disturbance to the water body bed and banks, and the surrounding land uses.
WQ-6	Limit Impact of Concrete Near Waterways	Concrete that has not been cured is alkaline and can increase the pH of the water; fresh concrete will be isolated until it no longer poses a threat to water quality using the following appropriate measures: 1. Wet sacked concrete will be excluded from the wetted channel for a period of four weeks after installation. During that time, the wet sacked concrete will be kept moist

		(such as covering with wet carpet) and runoff from the wet sacked concrete will not be allowed to enter a live stream. 2. Poured concrete will be excluded from the wetted channel for a period of four weeks after it is poured. During that time, the poured concrete will be kept moist, and runoff from the wet concrete will not be allowed to enter a live stream. Commercial sealants (e.g., Deep Seal, Elasto-Deck Reservoir Grade) may be applied to the poured concrete surface where difficulty in excluding water flow for a long period may occur. If a sealant is used, water will be excluded from the site until the sealant is dry. 3. Dry sacked concrete will not be used in any channel. 4. An area outside of the channel and floodplain will be designated to clean out concrete transit vehicles.
WQ-9	Use Seeding for Erosion Control, Weed Suppression, and Site Improvement	Disturbed areas shall be seeded with native seed as soon as is appropriate after activities are complete. An erosion control seed mix will be applied to exposed soils down to the ordinary high water mark in streams. 1. The seed mix should consist of California native grasses, (for example *Hordeum brachyantherum*; *Elymus glaucus*; and annual *Vulpia microstachyes*) or annual, sterile hybrid seed mix (e.g., Regreen™, a wheat x wheatgrass hybrid). 2. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable, or have other appropriate erosion control measures in place.
WQ-11	Maintain Clean Conditions at Work Sites	The work site, areas adjacent to the work site, and access roads will be maintained in an orderly condition, free and clear from debris and discarded materials on a daily basis. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust into storm drains or waterways. For activities that last more than one day, materials or equipment left on the site overnight will be stored as inconspicuously as possible, and will be neatly arranged. Any materials and equipment left on the site overnight will be stored to avoid erosion, leaks, or other potential impacts to water quality Upon completion of work, all building materials, debris, unused materials, concrete forms, and other construction-related materials will be removed from the work site.
WQ-15	Prevent Water Pollution	Oily, greasy, or sediment laden substances or other material that originate from the project operations and may degrade the quality of surface water or adversely affect aquatic life, fish, or wildlife will not be allowed to enter, or be placed where they may later enter, any waterway.

		The project will not increase the turbidity of any watercourse flowing past the construction site by taking all necessary precautions to limit the increase in turbidity as follows: 1. where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases will not exceed 5 percent; 2. where natural turbidity is greater than 50 NTU, increases will not exceed 10 percent; 3. where the receiving water body is a dry creek bed or storm drain, waters in excess of 50 NTU will not be discharged from the project. Water turbidity changes will be monitored. The discharge water measurements will be made at the point where the discharge water exits the water control system for tidal sites and 100 feet downstream of the discharge point for non-tidal sites. Natural watercourse turbidity measurements will be made in the receiving water 100 feet upstream of the discharge site. Natural watercourse turbidity measurements will be made prior to initiation of project discharges, preferably at least 2 days prior to commencement of operations.
WQ-16	Prevent Stormwater Pollution	To prevent stormwater pollution, the applicable measures from the following list will be implemented: 1. Soils exposed due to project activities will be seeded and stabilized using hydroseeding, straw placement, mulching, and/or erosion control fabric. These measures will be implemented such that the site is stabilized and water quality protected prior to significant rainfall. In creeks, the channel bed and areas below the Ordinary High Water Mark are exempt from this BMP. 2. The preference for erosion control fabrics will be to consist of natural fibers; however, steeper slopes and areas that are highly erodible may require more structured erosion control methods. No non-porous fabric will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff, but only if there are no indications that special-status species would be impacted by the application. 3. Erosion control measures will be installed according to manufacturer's specifications. 4. To prevent stormwater pollution, the appropriate measures from, but not limited to, the following list will be implemented: • Silt Fences • Straw Bale Barriers • Brush or Rock Filters • Storm Drain Inlet Protection • Sediment Traps or Sediment Basins

		• Erosion Control Blankets and/or Mats • Soil Stabilization (i.e. tackified straw with seed, jute or geotextile blankets, etc.) • Straw mulch. 5. All temporary construction-related erosion control methods shall be removed at the completion of the project (e.g., silt fences). 6. Surface barrier applications installed as a method of animal conflict management, such as chain- link fencing, woven geotextiles, and other similar materials, will be installed no longer than 300 feet, with at least an equal amount of open area prior to another linear installation.
Traffic and Transportation		
TR-1	Incorporate Public Safety Measures	Fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction, to give adequate warning to the public of the construction and of any dangerous condition to be encountered as a result thereof.
SANTA CLARA VALLEY HABITAT PLAN CONDITIONS		
Condition 1	Avoid Direct Impacts on Legally Protected Plant and Wildlife Species	Compliance with this measure would necessitate avoiding take of nesting white-tailed kites either by implementing repairs during the non-breeding season (1 September to 31 January) or by conducting pre-construction surveys and maintaining appropriate buffers around kite nests that contain eggs or young.
Condition 3	Maintain Hydrologic Conditions and Protect Water Quality	The proposed project will not change hydrologic conditions or modify the channel morphology of Lower Silver or Flint Creeks. Compliance with this measure necessitates implementing the measures listed in Chapter 6 (Table 6-2) of the Santa Clara Valley Habitat Plan (http://scv-habitatagency.org/178/Final-Habitat-Plan). These measures are BMPs to protect water quality and avoid other adverse effects, such as source and treatment control measures to prevent pollutants from leaving the construction site and minimizing site erosion and local sedimentation during construction. Many of these measures overlap or are similar to the District's BMPs.
Condition 15	Western Burrowing Owl Avoidance	The proposed project would temporarily and permanently disturb areas in the western portion of the project site that are mapped as western burrowing owl. Compliance with Condition 15 requires avoidance or minimization of direct impacts to western burrowing owls. This condition incorporates survey, avoidance, and minimization guidelines from western burrowing owl conservation plans and other sources pertaining to the VHP study area.
Condition 17	Tricolored Blackbird	The project area includes riparian habitat that could potentially be used by the tricolored blackbird. Condition 17 is to avoid direct impacts of covered activities on nesting

		tricolored blackbird colonies. This condition in the VHP is required as it is located within 250 feet of a riparian cover type. If a project meets this criterion, a qualified biologist is required to conduct a field investigation to identify and map potential nesting substrate. Nesting substrate includes flooded, thorny or spiny vegetation.

SECTION 3: ENVIRONMENTAL SETTING

General Description for the Project Site

The Cunningham Flood Detention Facility (project site) is situated within the Lake Cunningham Park, which is a 202-acre water-oriented park, in the southeast section of the City of San Jose on Assessor's Parcel Numbers (APN): 49101030, 49101031, 49102025, 49102046, 49102066, and 49132043. A regional location map is shown in Figure 1: Regional Location Map. The park is bounded by Capitol Expressway to the west, Cunningham Avenue to the north, South White Road to the east, and Tully Road to the south and is just upstream of the District's Lower Silver Creek Flood Protection Project.

The park was designed and constructed in accordance with a LCP Master Plan originally developed in 1976 by the City to function dually as a recreational and flood detention facility. Lower Silver Creek, Flint Creek, and Ruby Creek flow along the perimeter of the park. A map of the project site is shown in Figure 2: Project Vicinity Map.

Surrounding Land Uses

Surrounding land uses include: residential uses to the north along Cunningham Avenue; a car dealership to the southwest; the Reid-Hillview Airport to the west and open space that was a former golf course to the east. Uses within the LCP that surround the area of proposed construction include a water park (Raging Waters) in the western portion of the project site and picnic areas in the eastern portion of the project site.

Existing Infrastructure Description

The project site contains an existing earthen levee along Lower Silver Creek and a berm along Flint Creek. A trash compactor is located in the northeast corner of the project site adjacent to the Cunningham Avenue/ South White Road intersection. The trash compactor is operated by the City of San Jose Parks and Neighborhood Services Department and serves LCP and several other parks in the project vicinity.

Several utility lines are located within the project site including three PG&E gas transmission and electrical lines located in the northeast and northwest portion of the project site, and a City water line and AT&T communication line located in the northeastern portion of the project site. The gas transmission lines located in the western portion are located underneath the lower maintenance road adjacent to Lower Silver Creek before they exit the project site at the vehicle bridge that crosses over Lower Silver Creek. The PG&E electrical lines located in the northwest section of the park originate from Raging Waters and travel north toward Cunningham Avenue on top of the levee through the project site before they exit the project site. A three-inch City water line, a two-inch AT&T communication line, and a PG&E electrical line are located in the northeast portion of the project site near the intersection of South White Road and Cunningham Avenue near the City's existing trash compactor.

SECTION 4: ENVIRONMENTAL EVALUATION

Initial Study Checklist

In accordance with CEQA, the following Initial Study Checklist analyzes the project's potential environmental effects in order to determine the appropriate level of environmental review needed. Answers to the checklist questions provide factual evidence and District rationale for determinations of the potential significance of impacts resulting from the proposed project.

ENVIRONMENTAL CHECKLIST FORM

1. Project Title:	Cunningham Flood Detention Facility Certification Project
2. Lead Agency Name and Address:	Santa Clara Valley Water District 5750 Almaden Expressway San Jose CA 95118
3. Contact Person and Phone Number:	Tim Tidwell (408) 630-3003
4. Project Location:	The Cunningham Flood Detention Facility (project site) is situated in the District's East Zone within the LCP, which is a 202-acre water-oriented park, in the southeast section of the City of San Jose on Assessor's Parcel Numbers (APN): 49101030, 49101031, 49102025, 49102046, 49102066, and 49132043. A regional location map is shown in Figure 1: Regional Location Map. The park is bound by Capitol Expressway to the west, Cunningham Avenue to the north, South White Road to the east, and Tully Road to the south and is just upstream of the District's Lower Silver Creek Flood Protection Project. The park was designed and constructed in accordance with a LCP Master Plan originally developed in 1976 by the City of San Jose (City) to function dually as a recreational and flood detention facility. Lower Silver Creek, Flint Creek, and Ruby Creek flow along the perimeter of the park. A map of the project site is shown in Figure 2: Project Vicinity Map.
5. Project Sponsor's Name	Santa Clara Valley Water District 5750 Almaden Expressway San Jose CA 95118
6. General Plan Designation:	OSPH - Open Space Parklands and Habitats
7. Zoning:	R-1-8 and Commercial Pedestrians (CP)

8. Description of the Project:	The District completed a planning study to validate the existing flood detention facility's floodwater storage capacity to ensure the flow released into Lower Silver Creek downstream (north) of Cunningham Avenue could be safely conveyed with adequate freeboard. The planning study identified flood improvement measures to ensure the Lower Silver Creek's project's design flow parameters are met. Flood improvement measures include: raising the existing levee along Lower Silver Creek and constructing a floodwall along Flint Creek to ensure the flood detention facility can be certified with the Federal Emergency Management Agency (FEMA). Proposed flood improvement measures are described below and shown in Figure 4: Site Plan. • **Raised Levee** - The proposed project includes raising the exterior levee along Lower Silver Creek up to 3 feet above the existing grade and up to 4 feet near the Cunningham Avenue Bridge and vehicular bridge over Lower Silver Creek to meet FEMA freeboard requirements. About 3,200 LF of levee would be reconstructed. The minimum crown width of the raised levee would be ten feet. The side slopes of the levee would be a minimum of 2:1. • **New Floodwall** - The proposed project includes construction of about 1,300 LF of concrete floodwall along the top of the existing berm in the eastern portion from the Cunningham Avenue bridge east toward South White Road along Flint Creek. The maximum anticipated height of the floodwall is approximately 3 feet above the existing grade; except for the areas close to the Cunningham Avenue Bridge over Lower Silver Creek, and the pedestrian bridge over Flint Creek, which would be approximately 4 feet. • **Trail Regrading** - Approximately 70 feet of trails between the lake shoreline and the Big Meadow would be lowered below an approximate elevation of 124 feet in order to convey stormflows. After construction is completed, the disturbed areas would be seeded with native grasses/forbs to re-establish vegetative cover. • **Replaced Fence** - The existing chain-link fence along the park's Cunningham Avenue frontage would be replaced with new chain-link fencing of the same type and function. The replaced fence would be about 1,500 ~~4,200~~ feet in length. • **Relocated Trash Compactor, Green Waste Collection Area, and Pedestrian Path** - The proposed

	project would require relocation of the City's trash compactor, green waste collection area, and construction of a new pedestrian entrance that are currently located at the corner of Cunningham Avenue and South White Road to clear space for construction of the floodwall. The trash compactor and green waste collection area would be relocated about 1,500 feet southward to near the park's existing maintenance area. An electrical conduit would be installed along a concrete path from South White Road to provide power to the trash compactor. The pedestrian path and park entrance would be constructed approximately 80 feet south along South White Road. Once the proposed project and the Lower Silver Creek Flood Protection Project are complete, a Letter of Map Revision (LOMR) will be prepared and submitted to FEMA to revise the applicable flood insurance rate maps. Completion of both the proposed project and the Lower Silver Creek project would provide 1% flood protection to more than 3,200 homes, businesses and schools in the Lower Silver Creek 1% floodplain near and north of LCP.
9. Surrounding Land Uses	Surrounding land uses include: residential uses to the north along Cunningham Avenue; a car dealership to the southwest; the Reid-Hillview Airport to the west and open space that was a former golf course to the east. Uses within the LCP that surround the area of proposed construction include a water park (Raging Waters) in the western portion of the project site and picnic areas in the eastern portion of the project site.
10. Other public agencies whose approval is required:	California Department of Fish and Wildlife (CDFW), State Water Resources Control Board (SWRCB), San Francisco Bay Regional Water Quality Control Board (RWQCB), Santa Clara Valley Habitat Agency, and the City of San Jose.
11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section21080.3.1? If so, has consultation begun?	The Muwekma Ohlone Indian Tribe, Ohlone Indian Tribe, Amah Mutsun Tribal Band, Indian Canyon Mutsun Band of Costanoan Tribe, and Amah Mutsun Tribal Band of Mission San Juan Bautista were notified and given the opportunity to consult on the proposed project. One request for consultation was received by the Amah Mutsun Tribal Band of Mission San Juan Bautista on April 20, 2017. Formal consultation was initiated with the Amah Mutsun Tribal Band of Mission San Juan Bautista on May 8, 2017.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agricultural Resources		Air Quality
	Biological Resources		Cultural Resources		Geology / Soils
	Greenhouse Gas Emissions		Hazards & Hazardous Materials		Hydrology / Water Quality
	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation / Traffic		Tribal Cultural Resources		Utilities / Service Systems
	Mandatory Findings of Significance				

On the basis of this initial evaluation:

The District finds that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
The District finds that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	✓
The District finds that the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.	
The District finds that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
The District finds that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Signature

Date

Tim Tidwell
Environmental Planner
Santa Clara Valley Water District

1. AESTHETICS

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect on a scenic vista?				✓
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				✓
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			✓	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	

ENVIRONMENTAL SETTING

The project site is located at the periphery of the LCP along the existing levee adjacent to Lower Silver Creek in the western and northern portion of the project site and along an existing berm that is located along Flint Creek in the eastern portion of the project site. The riparian corridor along Flint Creek is dominated by a dense tree cover with a manicured understory. The riparian corridor in the western portion of the project site along Lower Silver Creek is comprised of dense willow stands intermixed with non-native trees with canopy gaps, which provide views into the park. There are approximately 176 trees in the vicinity of the proposed levee raising and floodwall construction areas as well as an additional 30 trees along Cunningham Avenue. North and west of Lower Silver Creek is comprised of barren open ground covered by a thick layer of mulch, access roads, and stockpiled sediments. A chain-link fence borders the entire project site.

The existing levees along Lower Silver Creek are approximately 12 and 20 feet high with side slopes ranging from 2.5 horizontal to 1 vertical (2.5H:1V) to 4H:1V. The levee is predominately covered with grass and a rock covered maintenance road that run along portions of the inner perimeter and tops of the levees.

Views into the northeastern and eastern portion of the project site are currently obscured by the existing trees and vegetation located at the perimeter of the LCP. Figures 5a and 5b present existing views of the northern portion of the project site from Cunningham Avenue and surrounding residential uses.

Regulatory Framework

The City of San Jose's *Envision San Jose 2040 General Plan* identifies scenic resources throughout the City, including the "broad sweep of the Santa Clara Valley, the hills and mountains, which frame the Valley floor, the baylands and the urban skyline, particularly high-rise development." The General Plan includes goals and policies to protect visual access to scenic resources and identifies scenic routes, which afford especially aesthetic views. According to the General Plan, there are no scenic vistas, scenic highways or scenic streets in the vicinity of the project site.

According to the City's General Plan "large specimen and heritage trees, especially native oaks, have special aesthetic and historical value." The City's Community Forest softens the effects of urban development, raises neighborhood and commercial property values, and contributes to the community's identity and sense of place. Applicable policies in the General Plan regarding the community forest include:

- **Community Forest Policy MS-21.2**: Provide appropriate resources to preserve, protect and expand the City's Community Forest

- **Community Forest Policy MS-21.8:** For Capital Improvement Plan or other public development projects, or through the entitlement process for private development projects, require landscaping including the selection and planting of new trees to achieve the following goals:

  - Avoid conflicts with nearby power lines.

  - Avoid potential conflicts between tree roots and developed areas.

  - Avoid use of invasive, non-native trees.

  - Remove existing invasive, non-native trees.

  - Incorporate native trees into urban plantings in order to provide food and cover for native wildlife species.

  - Plant native oak trees and native sycamores on sites which have adequately sized landscape areas and which historically supported these species.

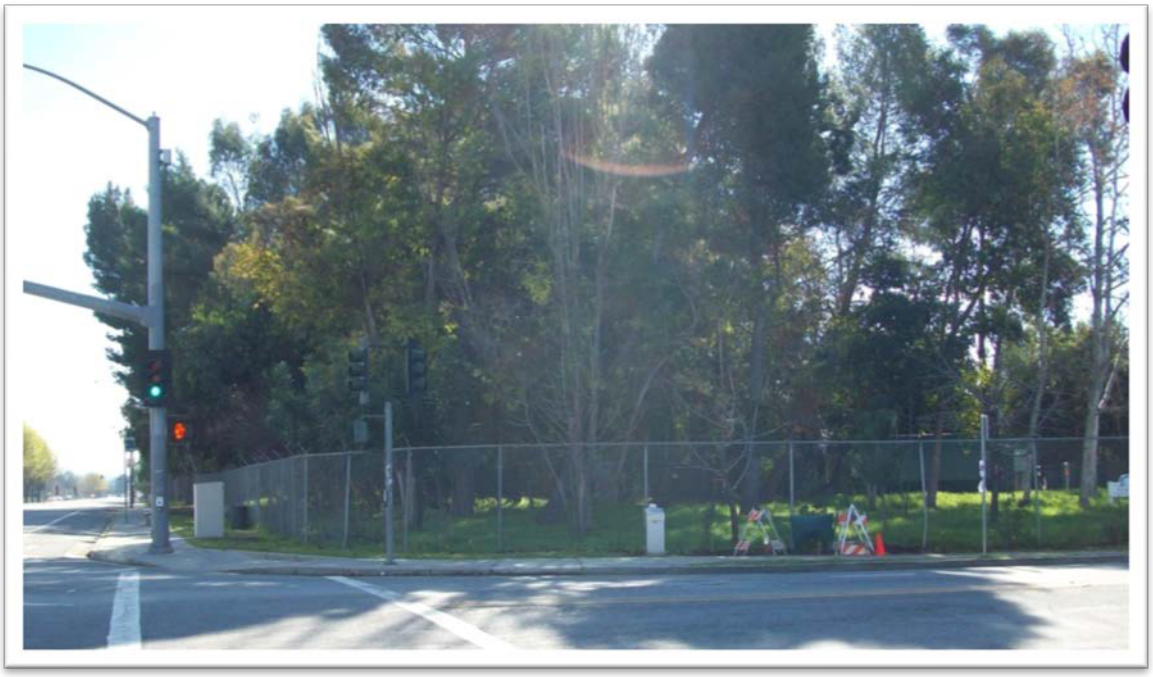


Photo 1. View of the project site from the corner of Cunningham Avenue and South White *Road.*

Photo 2. View of the existing trash compactor and pedestrian entrance near the corner of Cunningham Avenue and South White *Road.*

Figure 5a: Photos of the Project Site

Photo 3. View of the project site and the existing Aleppo pine trees that line Cunningham Avenue from the corner of Cunningham Avenue and the Lower Silver Creek bridge.

Photo 4. View of the existing levee along Lower Silver Creek.

Figure 5b: Photos of the Project Site

DISCUSSION

a, b) ***No Impact.*** The project site is located within an urbanized area in the Evergreen area of the City of San Jose. The visual character of the project site is characterized by the existing levee along Lower Silver Creek and berm along Flint/Ruby Creek, as well as surrounding trees and vegetation within LCP. The visual character of the surrounding area is urban and includes predominantly residential uses to the north and surrounding improvements at LCP (e.g., Raging Waters, picnic areas, etc.).

Construction activities associated with the proposed project would be visible from adjacent residential uses and public roadways in the project vicinity for a period of up to 12 months. The proposed project would include clearing and grubbing of vegetation and the removal of approximately 91 trees.

The proposed project would include reconstruction of the existing levee along Lower Silver Creek and construction of a floodwall in the eastern portion of the project site. The proposed project includes raising the exterior levee along Lower Silver Creek three feet to meet FEMA freeboard requirement. The levee would be raised four feet near the Cunningham Avenue Bridge and the vehicular bridge over Lower Silver Creek. The minimum crown width of the raised levee would be approximately ten feet. The side slopes of the levee would be a minimum of 2:1. Tie-in walls and re-grading would also occur at the park's interior vehicular bridge in the western portion of the project site to maintain access to the maintenance road located on top of the levee.

A 1,300-foot long floodwall would be constructed on top of the existing berm in the eastern portion of the project site from the Cunningham Avenue bridge east toward South White Road. The floodwall would be backfilled to the highest ground surface elevation of 136.1 feet and would have a maximum height of three feet, except for short sections near the Cunningham Avenue Bridge and pedestrian bridge which would be 4 feet in height. The existing chain-link fence located along Cunningham Avenue would be removed and replaced with chain-link fencing of the same type and function.

According to the *City of San Jose General Plan*, the project site is not located in the vicinity of a scenic vista or scenic highway. Therefore, elements of the proposed project visible from surrounding uses and public roadways would not block or impair any scenic vistas or scenic highways in the project vicinity and would therefore have no impact.

c) ***Less than Significant Impact.*** Views of the project site would be primarily from residential uses located north of the project site across Cunningham Avenue, as well as pedestrian and vehicular traffic along adjacent roadways including Capitol Expressway and Cunningham Avenue. Interior views from the park looking toward the proposed project would be partially or completely obscured by existing riparian vegetation located between the park road and Lower Silver Creek and Flint Creek.

The project site is located within the LCP which is a man-made, heavily managed regional park including a recreational park, Lake Cunningham, skate park, bike park, and a water park. LCP is located in an urbanized portion of the City of San Jose adjacent to an active airport and is bordered by active transportation corridors on all sides. On-going maintenance activities occur throughout LCP for recreational and flood control purposes. Vegetation removal including tree removal, equipment staging, construction activities, and construction traffic would be visible from adjacent residential properties and public roadways in the project vicinity for a period of up to 12 months. Given the environmental setting of LCP within an urbanized portion of the City of San Jose and the heavily managed nature of LCP, the proposed construction activities during the short construction window would not substantially degrade the visual character of the LCP or the surrounding area.

As described above, approximately 91 trees would be removed during construction to accommodate the proposed project. In the eastern portion of the project site, construction of the floodwall would require the removal of approximately 56 trees including 26 trees along the floodwall alignment and 30 street trees located along Cunningham Avenue for equipment access to construction areas. Approximately 14 trees would be removed to accommodate construction of the new pedestrian path and relocation of the green waste collection area. In the western portion of the project site, approximately 21 trees would be removed to raise the existing levee. The eastern portion of the project site is comprised of a dense tree cover along either side of Flint Creek. Although approximately 40 trees (26 trees near the proposed floodwall and 14 trees near the new pedestrian path and green waste collection area) would be removed from this area, the additional dense tree cover in the area (consisting of trees of similar stature and maturity) and located along the opposite bank of Flint Creek, would continue to provide the overall visual appearance of a forested park. In the western portion of the project site, raising of the levee would require the removal of approximately 21 trees located along the exterior slope of the existing levee outside of the riparian corridor. However, trees located within the Lower Silver Creek riparian corridor, consisting of dense willow stands intermixed with non-native trees, would continue to provide the visual appearance of a forested park. Removal of these trees would not substantially degrade the existing visual character or quality of the site and surroundings. The 30 street trees along Cunningham Avenue consist of non-native trees of similar age (less than 10 years) and stature. Among the 30 street trees, six trees exhibit a thin canopy and four trees are completely dead. As a group, these relatively young trees provide minimal screening in their current condition between the park and the residents along Cunningham Avenue. These trees provide minimal screening of the park. The visual impact from tree removal would be less than significant. However, implementation of Mitigation Measures BIO-2, BIO-3a and BIO-3b (which were proposed to address the significant impact relating to removal of city ordinance-protected and/or riparian trees) would further reduce the visual impact from tree removal. As discussed in Section 4 Biological Resources, Mitigation Measure BIO-2 would require the District to replant trees at a minimum ratio of 1:1 for any removed trees that are subject to protection by city ordinance or other environmental laws or regulations. Further, the replacement plants would be installed in accordance with District BMP BI-8 (Choose Local Ecotypes Of Native Plants and Appropriate Erosion-Control Seed Mixes) to ensure the planted tree species would be ecologically appropriate. Installation of replacement planting and associated site restoration work would return the project site to preconstruction conditions over the long-term. This would also be consistent with Community Forest Policy MS-21.2 and Policy MS-21.8 in the City of San Jose General Plan, which strives

to expand the City's community forest and by removing existing invasive, non-native trees and the incorporation of native trees into urban plantings. Mitigation Measures BIO-3a and BIO-3b would also further minimize project construction impacts on trees through implementation of tree preservation measures.

The Lower Silver Creek levee along Capitol Expressway and Cunningham Avenue is surrounded by a pedestrian sidewalk, ornamental landscaping and a chain-link fence. In its existing condition, the levee is comprised of barren open ground, a thick layer of mulch, gravel access roads, and stockpiled soils. The levee is vegetated with low lying grasses and non-native shrub species. Sparse ornamental landscaping consisting of planted tree and shrub species is located along Cunningham Avenue facing the residential properties to the north. In this portion of the project site the levee is heavily managed and the overall visual character of the levee is disturbed. The project would entail raising of the Lower Silver Creek levee up to three feet as well as up to four feet near the Cunningham Avenue Bridge and vehicular bridge over Lower Silver Creek to provide the FEMA required freeboard. Once the levee is raised, the primary views of the raised levee would be from vehicular and pedestrian traffic on Capitol Expressway and Cunningham Avenue, as well as from existing residential uses located north of the project site along Cunningham Avenue. The levee crest would support a gravel maintenance road and would continue to be used to stockpile soils. In addition, the District would hydroseed the exterior portion of the levee with a native grass seed mix. Given that the proposed use and land cover of the levee would be comparable to the existing condition, it can be concluded that raising of the levee would not substantially degrade the visual character of the levee, which is disturbed in nature. Thus, impacts to the visual character of LCP and the surrounding area due to raising of the levee are determined to be less than significant.

The eastern portion of the project site proposed for floodwall construction is surrounded by a pedestrian sidewalk, ornamental landscaping and a chain-link fence. The majority of the riparian corridor in this area is dominated by non-native trees with a manicured understory. The proposed floodwall in the eastern portion of the project site would be a maximum of three feet high above the existing elevation; except for the areas close to the Cunningham Avenue bridge over Lower Silver Creek and the pedestrian bridge over Flint Creek, which would be approximately four feet. Once the floodwall is constructed, the primary views of the floodwall would be from vehicular and pedestrian traffic on Cunningham Avenue, as well as from existing residential uses to the north. The floodwall would be constructed on the crest of an existing berm compromised of manicured grasses and non-native trees. As the new floodwall would be a maximum of four feet above the existing berm, it would comprise only a small portion of the LCP frontage. Given that the proposed floodwall would only comprise a small portion of the LCP frontage and be located on an existing maintained berm, it can be concluded the overall visual appearance of a forested park would not change. Thus, the proposed floodwall would not substantially degrade the visual character of LCP or the surrounding area and would be considered less than significant. The proposed project also includes relocation of an existing trash compactor from the corner of Cunningham Avenue and South White Road to within the park near the parks existing maintenance area. Relocation of the trash compactor and construction of new pedestrian path would change views of the park from the Cunningham Avenue/South White Road intersection. The trash compactor is an unsightly feature and its removal away from the park entrance would improve visual quality. The new pedestrian path would be located in the same general area and

would be similar in size and appearance to the existing path. Impacts to visual quality would be less than significant.

Based on the above, the proposed project would not substantially degrade the existing visual character and quality of the site or its surroundings, and would be considered a less than significant impact.

d) ***Less than Significant Impact.*** Streetlights, vehicle head and tail lights, and lighting associated with existing development provide existing sources of light and glare at the project site. The proposed project does not include the installation of permanent lighting, and construction activities would primarily occur during the daytime hours. Nighttime construction activities would require general construction lighting to ensure worker safety and abide by safety standards. Nighttime construction activities requiring work area lighting would only occur on weekdays for a short duration until 7:00 PM. In addition, nighttime construction activities would only occur as necessary through winter and early spring until daytime hours lengthen providing sufficient ambient light for construction to commence without work area lighting. Given that nighttime construction activities would occur on a limited basis and work area lighting would only be required for a short duration, construction activities would not create a new source of substantial light or glare.

The proposed project includes a proposed floodwall that would be visible from Cunningham Avenue and residences located to the north. However, because the floodwall would be low (up to 3 to 4 feet in height above ground) and partially obscured by vegetation and trees, this project feature would not result in substantial glare to the surrounding uses. The project would also include in-kind replacement of the chain-link fence along the Cunningham Avenue frontage of LCP. The replaced fence would not contribute to additional glare at the project site as compared to existing conditions.

Therefore, the proposed project would not create a new source of substantial light or glare. The impact would be less than significant.

1. *AGRICULTURE AND FOREST RESOURCES*

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

ENVIRONMENTAL SETTING

The project site was historically utilized for agricultural production prior to development of the LCP in the late 1970s. The project site is now located in an urbanized area and there are no agricultural uses or forest resources at the project site or in the project vicinity. According to the *Santa Clara County Important Farmlands Map* (Department of Conservation 2010), the project site and surrounding uses are designated as "Urban and Built-Up Land." Urban and Built Up Land is defined as being occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately 6 structures to a 10-acre parcel. Common examples include residential,

industrial, commercial, institutional facilities, cemeteries, airports, golf courses, sanitary landfills, sewage treatment and water control structures. The project site is not zoned for agricultural use.

DISCUSSION

a, b) ***No Impact.*** The project site is not in agricultural use and is surrounded by urban uses. The proposed project would not result in the conversion of Farmland, conflict with a Williamson Act contract, or result in any other changes that would result in the conversion of farmland since the project site is surrounded by urban uses. Therefore, the proposed project would have no impact on agricultural resources.

c, d) ***No Impact.*** The project site is not located on forest land, timberland, or timberland zoned Timberland Production. Therefore, no impact would occur.

e) ***No Impact.*** There are no agricultural or forestry uses in the vicinity of the project site. The proposed project would not result in changes to the existing environment, which due to their location or nature could result in the conversion of Farmland or conversion of forest land.

1. AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Conflict with or obstruct implementation of applicable air quality plan?			✓	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violations?			✓	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			✓	
d) Expose sensitive receptors to substantial pollutant concentrations?			✓	
e) Create objectionable odors affecting a substantial number of people?			✓	

ENVIRONMENTAL SETTING

CalEEMod version 2016.3.1 was used to evaluate whether the proposed project would cause significant air quality or greenhouse gas impacts. The air quality and greenhouse gas analysis is incorporated herein and included as Appendix A.

The project site is located within the San Francisco Bay Area Air Basin (air basin) under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). Regional and local air quality in the basin is impacted by topography, dominant airflows, atmospheric inversions, location, and season. The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 3.1: Air Quality Monitoring Summary summarizes published monitoring data from 2012 through 2014, which is the most recent 3-year period available. The table displays data from two monitoring stations located in the project vicinity: San Jose-Knox Avenue (approximately 1.87 miles northwest of the project site) and the San Jose-Jackson Street (approximately 4.42 miles northwest of the project site). The project area has exceeded the standards for 8-hour ozone (state and federal), fine particulate matter less than 10 micrometers (PM_{10}) and fine particulate matter less than 2.5 micrometers ($PM_{2.5}$).

Table 3.1: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	Monitoring Year		
			2012	2013	2014
Ozone	1 Hour	Max 1 Hour (ppm)	0.101	0.093	0.089
		Days > State Standard (0.09 ppm)	1	0	0
	8 Hour	Max 8 Hour (ppm)	0.063	0.080	0.066
		Days > State Standard (0.07 ppm)	0	1	0
		Days > National Standard (0.075 ppm)	0	1	0
Carbon monoxide	8 Hour	Max 8 Hour (ppm)	1.86	ID	ID
		Days > State Standard (9.0 ppm)	0	0	0
		Days > National Standard (9 ppm)	0	0	0
Nitrogen dioxide	Annual	Annual Average (ppm)	0.013	0.015	0.013
	1 Hour	98th percentile (ppm)	0.0519	0.0518	0.0547
	1 Hour	Max 1 Hour (ppm)	0.0672	0.0587	0.0584
		Days > State Standard (0.18 ppm)	0	0	0
Sulfur dioxide	Annual	Annual Average (ppm)	ID	ID	ID
	24 Hour	Max 24 Hour (ppm)	0.003	0.001	ID
Inhalable coarse particles (PM_{10})	Annual	Annual Average ($\mu g/m^3$)	18.8	22.2	20.0
	24 hour	24 Hour ($\mu g/m^3$)	59.6	58.1	54.7
		Days > State Standard (50 $\mu g/m^3$)	2.9	15.2	3.1
		Days > National Standard (150 $\mu g/m^3$)	0	0	0
	Annual	Annual Average ($\mu g/m^3$)	ID	12.4	ID

Fine particulate matter ($PM_{2.5}$)[1]	24 Hour	24 Hour (μg/m^3)	38.4	57.7	24.3
		Days > National Standard (35 μg/m^3)	2.1	4.0	ID

Notes:
> = exceed ppm = parts per million μg/m^3 = micrograms per cubic meter
ID = insufficient data ND = no data max = maximum
[1] 2014 data from San Jose-Knox Avenue Station, 2012 & 2013 from San Jose-Jackson Street Station
Bold = exceedances
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
All data except for fine particulate matter are from the San Jose – Jackson Street monitoring station.
Sources: California Air Resources Board (ARB) 2015a and 2015b.

Attainment Status

The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." Federal nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards. Once a nonattainment area meets the standards and additional re-designation requirements in the Clean Air Act (CAA), the Environmental Protection Agency (EPA) will designate the area as a "maintenance area."

Each standard has a different definition, or 'form' of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour Carbon Monoxide (CO) standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the three-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard. The current attainment designations for the air basin are shown in Table 3.2: San Francisco Bay Area Air Basin Attainment Status. As shown below, the air basin is designated as nonattainment for ozone (state and national), fine particulate matter PM_{10} (state), and $PM_{2.5}$ (state and national).

Table 3.2: San Francisco Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment
Carbon monoxide	Attainment	Attainment
Nitrogen dioxide	Attainment	Attainment
Sulfur dioxide	Attainment	Attainment
PM_{10}	Nonattainment	Unclassified
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	Attainment
Sulfates	Attainment	No Federal Standards

Hydrogen sulfide	Unclassified	No Federal Standards
Visibility-reducing particles	Unclassified	No Federal Standards
Source: BAAQMD 2012		

Toxic Air Contaminants

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and diesel particulate matter (DPM).

Some studies indicate that diesel particulate matter (DPM) poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Sensitive Receptors

Those who are considered sensitive to air pollution include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. Sensitive receptor locations are facilities and buildings that house or attract children, the elderly, and people with illnesses or others who are especially sensitive to the effects of air pollutants. Hospitals, schools, convalescent facilities, and residential areas are examples of sensitive receptors. The nearest potentially sensitive receptors are existing residences located to the north of Cunningham Avenue, approximately 90 to 150 feet from the nearest project elements. Ocala Middle School is also located approximately 500 feet north of the project site.

Regulatory Framework

In June 2010, the BAAQMD adopted significance thresholds for agencies to use to assist with environmental review of projects under the CEQA. These thresholds were designed to establish the level at which BAAQMD believed air pollutant emissions would cause significant impacts under CEQA. The BAAQMD's recommended significance thresholds are the subject of ongoing litigation. BAAQMD is no longer recommending that their thresholds be used as a generally applicable measure of project's significant air quality impacts; however, BAAQMD recommends that lead agencies determine appropriate air quality thresholds of significance based on substantial evidence in the record. (http://www.baaqmd.gov/plans-and-climate/california-environmental-quality-act-ceqa/updated-ceqa-guidelines, accessed January19, 2017.)

The District has independently reviewed BAAQMD recommended thresholds from June 2010 including BAAQMD's Justification Report which explains the agency's reasoning for adopting the thresholds, and determined that they are supported by substantial evidence and are appropriate for use to determine significance in the environmental review of this project. Specifically, the District has determined that the BAAQMD thresholds are well-founded, based on air quality regulations, scientific evidence, and scientific reasoning concerning air quality and greenhouse gas emissions. The BAAQMD recommended significance thresholds are provided in Table 3.3: BAAQMD Thresholds of Significance below.

Table 3.3: BAAQMD Thresholds of Significance

Emission Sources	Pollutants (pounds/day)			
	ROG	NOx	PM_{10}	$PM_{2.5}$
BAAQMD Thresholds of Significance	54	54	82	54
Source: BAAQMD				

DISCUSSION

a) ***Less than Significant Impact.*** As shown in Table 3.2: San Francisco Air Basin Attainment Status, the project area is designated as nonattainment for state standards for 1-hour and 8-hour ozone, and 24-hour and annual respirable particulate matter (PM_{10}). The area is also designated nonattainment for federal standards for 8-hour ozone and 24-hour $PM_{2.5}$. The BAAQMD's *Bay Area 2010 Clean Air Plan* (2010 Clean Air Plan) is the regional air quality plan (AQP) for the Air Basin. The 2010 Clean Air Plan accounts for projections of population growth provided by Association of Bay Area Governments and vehicle miles traveled provided by the Metropolitan Transportation Commission, and it identifies strategies to bring regional emissions into compliance with federal and State air quality standards. The BAAQMD's Guidance provides two criteria for determining if a plan-level project is consistent with the current AQP control measures. However, the BAAQMD does not provide a threshold of significance for project-level consistency analysis. Therefore, the following criteria will be used for determining a project's consistency with the AQP.

Clean Air Plan Goals and Implementation. The primary goals of the *BAAQMD 2010 Clean Plan* are to: attain air quality standards; reduce population exposure to unhealthy air and protecting public health in the Bay area; and reduce greenhouse gas emissions and protect the climate. The proposed project would not result in a localized violation of state or federal air quality standards, as described in b) below. The proposed project would have a less than significant impact on particulate matter during construction activities and therefore would not result in a localized violation of state or federal air quality standards. The proposed project would also not significantly contribute to cumulative nonattainment pollutant violations (see discussion in c) below) and would not create objectionable odors affecting a substantial number of people (see discussion in e) below). Further, the proposed project would not generate a significant amount of greenhouse gases and would not conflict with the applicable plans adopted for reducing the emission of greenhouse gases after inclusion of the District's best management practices for air quality including BMP AQ-1 (Use Dust Control Measures) and AQ-2 (Avoid Stockpiling of Odorous Materials) (see discussion in section 7). Since the proposed project will not have a significant impact on attainment of air quality standards and exposing unhealthy air to populations in the Bay Area (see discussion in d) below), the proposed project supports the primary goals of the AQP and would not obstruct the implementation of the AQP.

Clean Air Plan Control Measures. The BAAQMD *2010 Clean Air Plan* contains 55 control measures aimed at reducing air pollution in the Air Basin. Along with the traditional stationary, area, mobile source, and transportation control measures, the 2010 Clean Air Plan contains a number of new control measures designed to protect the climate and promote mixed use, compact development to reduce vehicle emissions and exposure to pollutants from stationary and mobile sources (Bay Area Air Quality Management District 2010). None of the control measures contained in 2010 Clean Air Plan are directly applicable to the project. However, one measure applies to construction equipment in general:

> MSM C-1—Construction and Farming Equipment: Reduce emissions from construction and farming equipment by 1) cash incentives to retrofit construction and farm equipment with diesel particulate matter filters or upgrade to a Tier III or IV off-road engine; 2) work with CARB, CEC and others to develop more fuel efficient off-road engines and drive-trains; 3) work with local communities, contractors and developers to encourage the use of renewable alternative fuels in applicable equipment.

The proposed project would require that its contractor maintain and properly tune equipment in accordance with the manufacturer's specifications and that equipment is checked by a certified visible emissions evaluator. The proposed project would also require that contractors utilize retrofitted equipment when available. In summary, the proposed project would comply with all applicable rules and regulations and the project would not impede attainment because its emissions fall below the BAAQMD regional significance thresholds.

b) ***Less than Significant Impact.*** The main emissions of concern during construction are fugitive dust emitted during earth-disturbing activities (construction fugitive dust) and from the exhaust portion of PM_{10} and $PM_{2.5}$ generated by diesel-powered construction equipment at the project site. Nitrogen dioxide (NO_2) would also be generated by project diesel-powered construction. CO emissions would be generated during project

construction and operation from increases in on-road vehicle congestion. The level of impact from emission of each air pollutant is discussed separately below.

Fugitive Dust During Construction. The proposed project involves reconstructing and raising an existing levee in the western portion of the project and constructing a floodwall in the eastern portion of the project site. Additionally, trails along the Lake Cunningham shoreline would be regraded and a new trash compactor and green waste collection area would be installed at LCP. The proposed project would require removal of existing vegetation and grading of the project areas to prepare the site for construction. During construction (grading), fugitive dust (PM_{10}) would be generated from grading and other earth-moving activities. The majority of this fugitive dust will remain localized and would be deposited near the project site.

The BAAQMD does not have a quantitative threshold for fugitive dust. The BAAQMD's *Air Quality Guidelines* recommend that projects reduce emissions of fugitive dust to less than significant levels through application of Fugitive Dust Control Best Management Practices. Implementation of the District's BMP AQ-1 (Use Dust Control Measures) would require dust control measures to be implemented during construction activities. BMP AQ-1 includes dust control measures such as watering of all exposed surfaces two times daily, covering of sand, soil, or loose substrate on haul trucks, and limiting on-site vehicle speeds to 15 mph. The dust control measures contained in BMP AQ-1 are substantially similar to those recommended by BAAQMD. Implementation of BMP AQ-1 would result in a less than significant impact from fugitive dust emissions.

Exhaust Criteria Pollutants. Construction of the proposed project would occur in a linear fashion along the length of the levee, floodwall, trail regrading, and trash compactor construction areas and would not occur at any one portion of the project site for extended lengths of time. The nonattainment regional pollutants of concern are ozone, PM_{10}, and $PM_{2.5}$. The regional ozone significance threshold is based on emissions of ROG and NO_x. Construction and operational emissions are discussed separately below.

Construction Emissions. Project construction activities would result in temporary and short-term generation of ROG, NOx, PM_{10}, $PM_{2.5}$, and CO emissions from excavation, vegetation clearing, grading, motor vehicle exhaust associated with construction equipment, construction, employee commute trips, material transport, material handling and other construction activities. Construction would last up to 12 months in duration. Raising the Lower Silver Creek levee would require approximately 1,025 one-way haul trips based on a 16-cubic yard capacity of a haul truck for a total of 2,050 haul truck trips during construction of the levee.[5] Construction of the floodwall component of the proposed project requires approximately 13 one-way haul trips based on a 16-cubic yard capacity of the standard haul truck for a total of 26 total haul trips.

Project emissions from each construction phase were quantified using the CalEEMod version 2016.3.1 emission model for construction and employee travel. EMFAC 2014 mobile source emission factors were used to assess truck emissions. Project construction emissions were compared with the BAAQMD daily significance thresholds.

[5] Throughout the duration of construction for the proposed project, additional truck trips may be required. However, the number of truck trips would be low when compared to trips required for levee construction.

If emissions would be below the significance thresholds, the proposed project would have a less than significant impact.

Daily project emissions were calculated by first modeling the project's annual emissions and then dividing the annual emissions by the number of working days. Details regarding the project annual and daily construction emissions and related modeling results are provided in Appendix A. Construction of the proposed raised levee and the proposed floodwall are expected to occur concurrently. The combined emissions of all construction phases of the project are compared to the daily construction emissions significance thresholds developed by BAAQMD. As shown in Table 3.4 the proposed project would not exceed the BAAQMD's regional emission thresholds for construction exhaust for ROG, NOx, PM_{10}, or $PM_{2.5}$ emissions. Therefore, construction of the proposed project would result in a less than significant impact relating to violation of air quality standards.

Table 3.4: Criteria Air Pollutant Emissions

Parameter	Air Pollutants			
	ROG	NO_x	PM_{10}[1]	$PM_{2.5}$[1]
Total Emissions (tons/year)	0.45	5.19	0.2279	0.2097
Total Emissions (lbs/year)	890	10,368	456	419
Average Daily Emissions (lbs/day)[2]	3.4	39.7	1.7	1.6
BAAQMD Average Daily Threshold (lbs/day)	54	54	82	54
Significant?	No	No	No	No

Notes:
1. Exhaust only
2. Calculated by dividing the total lbs by the total 261 working days of construction for 2018.
lbs = pounds ROG = reactive organic gases NO_x = oxides of nitrogen
PM_{10} = particulate matter 10 microns in diameter
$PM_{2.5}$ = particulate matter 2.5 microns in diameter
See Modeling Results in Appendix A for details regarding emissions from each activity.
Source: CalEEMod version 2016.3.1

Operational Emissions. The level and nature of maintenance activities to ensure channel capacity once the project is constructed would remain unchanged from or similar to existing maintenance activities. Therefore, project operations would generate a less than significant impact relating to violation of air quality standards.

Operational CO Hotspot. Localized high levels of CO (CO hotspot) are associated with traffic congestion and idling or slow-moving vehicles. The BAAQMD has no threshold for localized CO impacts during construction. Construction activities would result in CO emissions. However, through implementation of District BMP AQ-1 which requires minimizing idling times by either shutting off equipment when not in use or limiting idling time to 5 minutes, as well as properly tuning and maintaining construction equipment, these CO emissions would be further reduced to less than significant levels. The BAAQMD's threshold for CO emissions during operation is 9 ppm (8-hour average) or 20 ppm (1-hour average).

Based on the above, construction and operation of the proposed project would not violate any air quality standard or substantially contribute to an existing or projected air quality violation. This would be a less than significant impact.

c) ***Less than significant Impact.*** Regional criteria pollutant impacts are the result of the cumulative contribution of emissions from existing and new sources throughout the region. The BAAQMD considered the emission levels for which a project's individual emissions would be cumulatively considerable. If a project exceeds the identified significance thresholds, its emissions would be cumulatively considerable. As discussed in b) above, none of the project's construction and operation emissions would be above the significance thresholds. As such, the project would not result in a cumulatively considerable net increase of any criteria pollutant. The impact would be less than significant.

d) ***Less than Significant Impact.*** This discussion addresses whether the proposed project would expose sensitive receptors to substantial pollutant concentrations of CO, $PM_{2.5}$, PM_{10}, and DPM, or other TACs of concern. A sensitive receptor is defined by the BAAQMD as the following: "Facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas" (BAAQMD 1999). The nearest sensitive receptors are existing residential homes are located approximately 90 feet north of the project site across Cunningham Avenue.

During construction activities, fugitive dust (PM_{10}) would be generated. As detailed in Impact b) above, the proposed project would result in a less than significant impact with respect to fugitive dust emissions. For criteria pollutants, the proposed project would result in a cumulatively significant impact if the project would generate criteria pollutant emissions exceeding any applicable BAAQMD thresholds of significance listed in Table 3.3 (BAAQMD 2012). Also, as discussed in b) above, the proposed project would not produce substantial daily criteria pollutant emissions above BAAQMD daily thresholds.

Construction project impacts are considered temporary since emissions no longer occur at the project site after construction is complete. Impacts from toxic emissions are assessed over a 70-year exposure period (Office of Environmental Health Hazard Assessment, [OEHHA] 2015). The BAAQMD indicates that toxic emissions occurring beyond 1,000 feet are indistinguishable from background levels when the project construction would result in exposure of a few months at most (BAAQMD 2012). Although the proposed project construction activities would occur over an up to 12-month period and the nearest residential homes are located approximately 90 feet from the project site, the total time that any receptor would be within 1,000 feet of active construction would be 2 to 3 months at most. This short period of exposure is a small fraction of the 70 years of exposure used to assess toxic emission impacts.

Emissions of criteria pollutants and DPM would not be expected to result in toxic impacts exceeding BAAQMD thresholds which is an increase in cancer risk of 10 in a million at the nearest sensitive receptor location. This impact would be less than significant.

e) ***Less than Significant Impact.*** As stated in the *BAAQMD 2010 Air Quality Guidelines*, odors are generally regarded as an annoyance rather than a health hazard and the ability to detect odors varies considerably and overall is considered subjective. The

proposed project consists of reconstruction and raising the height of an existing levee, as well as construction of a floodwall in the eastern portion of the project site. In order to construct the floodwall, the proposed project includes relocation of the City's existing trash compactor and green waste collection area from its existing location at the corner of Cunningham Avenue/South White Road to the southern portion of the LCP near the existing maintenance facility. Relocation of the City's trash compactor and green waste collection area would eliminate an existing odor source approximately 130 feet from nearby residences along Cunningham Avenue. After relocation, the trash compactor and green waste collection area would be located about 1,500 feet south of residences along Cunningham Avenue. The closest residences to these relocated facilities would beabout 1,000 feet south along Tully Road. At a distance of 1,000 feet odors would not be noticeable.

Diesel exhaust and volatile organic compounds (VOCs) would be emitted during construction of the proposed project, which are objectionable to some; however, emissions would disperse rapidly from the project site and therefore should not reach an objectionable level at the nearest sensitive receptors. Odors may also occur related to decaying organic material disturbed during grading activities and the construction process. Implementation of the District's BMP AQ-2 (Avoid Stockpiling Odorous Materials) would require that odorous materials are handled in a manner that avoids impacting the adjacent residential neighborhood located north of the project site. Therefore, the proposed project would have a less than significant odor impact to the adjacent residential neighborhoods.

2. BIOLOGICAL RESOURCES

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Have a substantial adverse effect, either directly or through habitat modification, on an identified candidate, sensitive, listed, or special status species in local or regional plans, policies, or regulation, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		✓		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the U.S. Fish and Wildlife Service?		✓		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means?				✓

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Interfere substantially with the movement of any native resident or migratory species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			✓	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		✓		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓

ENVIRONMENTAL SETTING

A biological site assessment was conducted by the District to determine whether any sensitive biological resources such as wetlands, streams, or habitats for special status species are located at the project site or vicinity and to determine whether or not the proposed project would result in potentially significant biological impacts. Sensitive biological resources include the following:

1. Plants or animals that are listed as rare, threatened, or endangered or as species of special concern, pursuant to Federal or State law, and habitat essential to special-status species of plants or wildlife;

2. Natural communities indicated as rare or threatened by the California Natural Diversity Database (CNDDB) of the California Department of Fish and Wildlife (CDFW);

3. Wetlands and streams, and the riparian vegetation surrounding them, or natural vegetation designated as significant natural habitat; and

4. Natural communities and associated buffers protected pursuant to applicable plans, policies, and regulations.

The evaluation of potential impacts to biological resources at the project site is based on the following:

- A biological survey that was conducted by District biologists on August 25, 2015, which started at the confluence of Lower Silver Creek and Flint Creek and progressed upstream along Lower Silver Creek,

- Database search of the CNNDB, which is maintained by the California Department of Fish and Wildlife was conducted to determine special status species and sensitive habitat occurrences at the project site and vicinity,

- Review of Santa Clara Valley Habitat Plan (VHP) to determine coverage under the plan and conditions that would be required during construction, and

- An arborist report prepared by Hortscience in September 2016 and an addendum letter to this report prepared by Hortscience in June 2017.

- A tree assessment prepared by the Santa Clara Valley Water District prepared in July 2017.

Three creeks are present within the project site. Flint and Ruby Creeks join the main stem of Lower Silver Creek at the northern end of the project site. Lower Silver Creek forms the western boundary of the project site and both Lower Silver Creek and Flint Creek contribute to the northern edge of the project site. The majority of the riparian corridor along Flint and Ruby Creeks in the eastern portion of the project site is dominated by non-native trees with a manicured understory (e.g., mowed), while the riparian corridor in the western portion of the project site along Lower Silver Creek is characterized by dense willow stands intermixed with non-native trees with more canopy gaps. A chain-link fence borders the entire project site. The area along Lower Silver Creek to the north and west is heavily managed and is dominated by barren open ground covered by a thick layer of mulch, access roads, and stockpiled sediments.

The proposed trash compactor and green waste collection relocation area is located to the south of the Ruby Creek outfall at a vacant area vegetated with grass and low ground cover. No trees are present and the site is located outside of the Ruby Creek riparian corridor. The proposed location of the trail regrading is along the existing trail network at LCP. No trees are present.

Vegetation

The left bank of Lower Silver Creek (looking downstream) is dominated by non-native grasses and emergent vegetation, with Fremont cottonwood (*Populus fremontii*) and blue gum eucalyptus (*Eucalyptus globulus*) interspersed. The right bank of the Lower Silver Creek was dominated by red willow (*Salix laevigata*), Fremont cottonwood, and blue gum eucalyptus.

Wildlife

Species observed during the biological survey include bushtit (*Psaltriparus minimus*), Eurasian collared dove (*Streptopelia decaocto*), mourning dove (*Zenaida macroura*), rock dove (*Columba livia*), snowy egret (*Egretta thula*), black phoebe (*Sayornis nigricans*), ring-billed gull (*Larus delawarensis*), great egret (*Ardea alba*), house finch (*Haemorhous mexicanus*), mallard (*Anas platyrhynchos)*, Canada goose (*Branta Canadensis*), Anna's hummingbird (*Calypte anna*), American crow (*Corvus brachyrhynchos*), turkey vulture (*Cathartes aura*), red-shouldered hawk (*Buteo lineatus*), California ground squirrel (*Otospermophilus beecheyi*), and western fence lizard (*Sceloporus occidentalis*).

Trees

Hortscience completed an arborist report in September 2016 and an addendum letter to this report in June 2017. An additional tree assessment was prepared by the Santa Clara Valley Water District in July 2017 to assess additional project impacts not previously evaluated (Appendix B). Based on the tree surveys, there are approximately 206 trees within the project site representing 15 different species. The diameters of the trees ranged from 2 inches to 38 inches. The majority of the trees at the project site are non-native trees that were either planted or self-seeded. No trees are present at the proposed site for relocation of the Park's trash compactor and green waste holding area.

DISCUSSION

a) ***Potentially Significant Impact with Mitigation Incorporated.*** According to the CNDDB (accessed March 17, 2016), maintained by the CDFW, there are approximately ten special status species occurrences within two miles of the project site. For purposes of this analysis, "special-status" animals are considered animal species that are:

- listed under Federal Endangered Species Act (FESA) as threatened, endangered, proposed threatened, proposed endangered, or a candidate species;
- listed under the California Endangered Species Act (CESA) as threatened, endangered or a candidate threatened or endangered species;
- designated by the California Department of Fish and Wildlife (CDFW) as a California species of special concern; or
- listed in the California Fish and Game Code as a fully protected species (fully protected birds are designated in §3511, mammals in §4700, reptiles and amphibians in §5050, and fish in §5515).

For the purpose of this analysis, "special status" plants include:

- listed under FESA as threatened, endangered, proposed threatened, proposed endangered, or a candidate species;
- listed under CESA as threatened, endangered, rare, or a candidate species; or
- ranked by the California Native Plant Society (CNPS) as rare or endangered in Ranks 1A, 1B, 2A, or 2B.

Special status species CNDDB occurrences~~located~~ within two miles of the project site include western burrowing owl (*Athene cunicularia*), California tiger salamander (*Ambystoma californiense*), Townsends big-eared bat (*Corynorhinus townsendii*), Crotch's bumble bee (*Bombus crotchii*), obscure bumble bee (*Bombus calignosus*), Contra Costa goldfields (*Lasthenia conjugens*), Congdon's tarplant (*Cetromadia parryi ssp. congdonii*), Hairless popcorn flower (*Plagiobothrys glaber*), robust spineflower (*Chorizanthe robusta var robusta*), and Santa Clara red ribbons (*Clarkia concinna ssp automixa*). Western pond turtle *(Emys marmorata*) have been observed within 3 miles of

the project site. The closest occurrence of white-tailed Kite (*Elanus leucurus*), a State Fully Protected Species, is 5.9 miles to the northeast in the Diablo Range foothills.

Several of the special status species observed within two miles are unlikely to occur at the project site due to lack of suitable habitat. The sensitive invertebrate species, Crotch's bumble bee and obscure bumble bee noted as occurring within two miles of the project site are not expected to occur based on current habitat conditions at the project site. Contra Costa goldfields, Congdon's tarplant, Hairless popcorn flower, robust spineflower, and Santa Clara red ribbons have very low potential to occur on site due to the heavily disturbed/managed landscape at the project site (e.g., mulching, establishment of non-native grasses and plants) and lack of serpentine soils. California tiger salamander also has low potential to occur at the project site due to land management activities within LCP and the presence of predatory fish and amphibians in creeks. Townsends big-eared bat (*Corynorhinus townsendii*) also has low potential to occur due to lack of roosting habitat and poor quality of foraging habitat at LCP.

White-tailed kite nests in dense trees away from high human activity near foraging habitat, which consists of open grasslands, meadows, agricultural fields, and marshes. The dense riparian area along Lower Silver Creek, and the mature trees along Flint and Ruby Creek could support nesting habitat. Foraging could occur at open space within the park and at the former golf course to the east, but the habitat is marginal and highly disturbed. In addition, the project site is located within a highly urbanized area of the City of San Jose and high disturbance land uses in the vicinity include the Reid-Hillview Airport, Raging Waters Water Park, and multiple transportation corridors. Therefore, breeding of white-tailed kite is not anticipated to occur within the low-quality nesting habitat on-site or in the nearby surrounding area.

Of the remaining special status species identified from the CNDDB search, the District further reviewed and determined whether those species have the potential to occur at the project site. A summary of this analysis is shown in Table 4.1: Special Status Species with Potential to Occur at the Project Site, below.

Table 4.1: Special Status Species with Potential to Occur at the Project Site

Species	Status	Habitat	Potential to Occur Onsite
Western Burrowing Owl (*Athene cunicularia*)	SSC~~CSC~~, VHP	Open habitats (e.g., grasslands, agricultural areas) with mammal burrows or other features (e.g., culverts, pipes, debris piles) suitable for nesting and roosting	The area along the creeks and managed landscapes could support foraging of burrowing owls, but the current condition (e.g., mulching) limits nesting within the project site. The area within the project footprint is considered poor burrowing owl habitat, limiting the potential of the species to occur.
Western Pond Turtle (*Emys marmorata*)	SSC~~CSC~~, VHP	Ponds, lakes, perennial and intermittent streams and rivers, and other wetlands with abundant vegetation, basking	Western pond turtles were observed in a percolation pond less three miles from the project site. Although none were observed during the survey, the project site

		habitat, and upland areas for reproduction	could potentially support western pond turtle.
San Francisco Dusky-footed Woodrat (*Neotoma fuscipes annectens*)	SSCCSC	Oak woodlands and riparian areas with dense shrubs and trees species	No woodrats were observed and no occurrences are documented within the project footprint, but areas of dense shrubs and trees near the riparian area could support woodrats
Tricolored Blackbird (*Aguilar tricolor*)	SCE, SSC~~CSC~~, VHP	Cattails, tall emergent vegetation, and flooded riparian vegetation	No occurrences within 3 miles, but riparian habitat could support nesting colonies and nearby areas could be used for foraging habitat. Due to amount of urbanization, nesting and foraging habitat is marginal and potential to occur is low.
Notes: ~~CSC~~ SSC ~~California~~ CDFW Species of Special Concern SCE-State candidate for listing as Endangered VHP-Species covered under Valley Habitat Plan			

Western Burrowing Owl – Western burrowing owl (burrowing owl) was sighted within the northwest corner of the project site in 2004. A survey conducted in 2008 at the LCP did not find any evidence of burrowing owls. The biological impact assessment conducted by the District on August 25, 2015 found no evidence of burrowing owl presence (owl pellets, fecal matter, feathers, etc.) within the project site and determined available habitat was limited. The vegetated margins along the creeks and managed landscape within the project site could support foraging of burrowing owls, but the land management activities (e.g., mulching) conducted by ~~the City currently~~ park maintenance staff limits nesting ~~the~~ potential ~~for nesting~~. The area within the project footprint is considered poor burrowing owl habitat and is not likely to support burrowing owls. However, the project site is mapped as occupied burrowing owl habitat in the *Santa Clara Valley Habitat Plan* (VHP) and owls occur within 3 miles of the project site. As described in Section 2: Project Description, the proposed project would be subject to applicable conditions and requirements in the VHP. Condition 15 of the VHP would require the proposed project to implement a number of measures to avoid or minimize impacts on western burrowing owl. Below is a summary of these measures:

- Prior to any project ground disturbance, a qualified biologist will conduct pre-construction surveys in all suitable habitat areas. The purpose of the preconstruction surveys is to document the presence or absence of burrowing owls on the projects site. The preconstruction survey will last a minimum of three hours and begin one hour before sunrise and last two hours after sunrise or begin two hours before sunrise and continue until one hour after sunrise. A minimum of two surveys will be conducted (if owls are detected on the first survey, a second survey would not be needed). All owls observed will be counted and their location will be mapped. Surveys may begin up to 14 days before start of construction, but must conclude no more than 2 days before start of construction.

- If evidence of burrowing owls is found **during the breeding season (Feb. 1 through August 31**, project construction activities will avoid the nest during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance will include the establishment of 250-foot buffer zone around the nest. Construction may occur outside the 250-foot non-disturbance buffer zone. Construction may occur within the buffer zone during the breeding season if:

    - The nest is not disturbed, and

    - The project sponsor develops an avoidance, minimization, and monitoring plan that will be reviewed by the VHP Implementing Entity prior to construction based on the following criteria:

        - The VHP Implementing Entity and wildlife agencies approve[6] of the plan,

        - A qualified biologist monitors the nest for at least 3 days prior to construction to determine baseline nesting and foraging behavior,

        - The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities,

        - If there is a change in owl behavior as a result of construction activities, these activities will cease within the 250-foot buffer zone until the adults and juveniles have moved out of the project area, and

        - If monitoring indicates that the nest is abandoned prior to the end of the nesting season and the burrow is no longer in use by owls, the non-disturbance buffer zone may be removed. The biologist will excavate the burrow to prevent reoccupation after receiving approval from wildlife agencies.

- If evidence of burrowing owls is found **during the non-breeding season (September 1 through January 31)**, project sponsor will establish a 250-foot non-disturbance buffer around the occupied burrows as determined by a qualified biologist. Construction activities outside of this 250-foot buffer are allowed. Construction may occur within the buffer zone if:

    - A qualified biologist monitors the nest for at least 3 days prior to construction to determine baseline nesting and foraging behavior,

    - The same qualified biologist monitors the owls during construction and finds no change in owl nesting and foraging behavior in response to construction activities,

[6] The Implementing Entity and wildlife agencies have 21 calendar days to respond to a request from the project sponsor to review the proposed construction monitoring plan. If the agencies do not respond within 21 calendar days, it will be presumed that they concur with the proposal and work can commence.

- If there is a change in owl behavior as a result of construction activities, these activities will cease within the 250-foot buffer zone, and

- If the owls are gone for at least one week, the project sponsor may request approval from the Implementing Entity that a qualified biologist excavate usable burrows to prevent owls from re-occupying the site. After all usable burrows are excavated, the buffer zone will be removed and construction may continue.

Implementation of the above measures will avoid or minimize impacts to western burrowing owls. Compliance with these measures would ensure that impacts to burrowing owl are less than significant.

San Francisco Dusky-Footed Woodrat – District biologists did not observe San Francisco dusk-footed woodrat nests within the project site. However, the riparian habitat along Lower Silver Creek and Flint Creek is suitable San Francisco dusky-footed woodrats and the proposed project could increase the chance of harm to individual woodrats if they are present at the project site during construction. Substantial harm to one or more woodrats would be considered a significant impact. Implementation of Mitigation Measure BIO-1 would reduce this impact to a less than significant level through use of pre-construction surveys and relocation of woodrat nests out of harm's way should they be found within the project vicinity.

Western Pond Turtle - Western pond turtles were observed in a percolation pond less than 3 miles from the project site. The proposed project would not require construction disturbance within the channels of Lower Silver, Flint, or Ruby creeks. No dewatering or construction activities in the channels would occur. Western pond turtles would therefore be able to leave the construction area under their own volition if they are disturbed by the proposed construction activity. District BMP BI-10 (Avoid Animal Entry and Entrapment) would also require the covering of open trenches, which would keep turtles from entering the construction area and becoming stranded. Therefore, this would be considered a less than significant impact.

Tricolored Blackbird - The project site is mapped as tricolored blackbird habitat in the VHP. Cattails, tall emergent vegetation, and flooded riparian vegetation associated with the riparian habitat along Lower Silver Creek and Flint Creek could potentially support nesting colonies of tri-colored blackbird, and surrounding habitat, although marginal in quality, could support foraging. However, there is no CNDDB record of this species within 3 miles of the project site and the habitat is fragmented and of low quality. Condition 17 of the VHP requires a number of measures to avoid impacts to tricolored blackbird including the following:

- Prior to any project ground disturbance, a qualified biologist will make his or her best effort to determine if there has been nesting at the site in the last 5 years. If no nesting in the last five years is evident, conduct a preconstruction survey in areas identified <u>in the habitat survey</u> as supporting potential tri-colored blackbird nesting habitat. Surveys will be made at the appropriate time of year when nesting use is expected to occur. The surveys will document the presence or absence of nesting colonies of tricolored blackbirds and will conclude no more than two days prior to construction.

- To avoid last minute changes in schedule or contracting that may occur if an active nest is found, the project proponent may also conduct a preliminary survey up to 14 days before construction. If a tricolored blackbird nesting colony is present, a 250-foot buffer will be applied from the outer edge of all hydric vegetation associated with the site and the site plus buffer will be avoided (see below for additional avoidance and minimization details). The wildlife agencies will be notified immediately of nest locations.

- Project construction must avoid tricolored blackbird nesting habitat that is currently occupied or has been occupied in the last 5 years. If tri-colored blackbird colonies are identified during the breeding season, construction activities will be prohibited within a 250-foot no-activity buffer zone around the outer edge of all hydric vegetation associated with the colony. This buffer may be reduced in areas with dense forest, buildings, or other habitat features between the construction activities and the active nest colony, or where there is sufficient topographic relief to protect the colony from excessive noise or visual disturbance. Depending on site characteristics, the sensitivity of the colony, and surrounding land uses, the buffer zone may be increased. Activities potentially affecting a colony will be observed by a qualified biologist to verify that the activity is not disrupting the colony. If it is, the buffer will be increased. Implementing Entity technical staff will coordinate with the wildlife agencies and evaluate exceptions to the minimum no-activity buffer distance on a case-by-case basis.

- If construction takes place during the breeding season when an active colony is present, a qualified biologist will monitor construction to ensure that the 250-foot buffer zone is enforced. If monitoring indicates that construction outside of the buffer is affecting a breeding colony, the buffer will be increased if space allows (e.g., move staging areas farther away). If space does not allow, construction will cease until the colony abandons the site or until the end of the breeding season, whichever occurs first. The biological monitor will also conduct training of construction personnel on the avoidance procedures, buffer zones, and protocols in the event that tricolored blackbirds fly into an active construction zone (i.e., outside the buffer zone).

Compliance with the above measures would ensure that the proposed project would have a less than significant impact on tricolored blackbird.

Nesting Migratory Birds. The trees and riparian vegetation along Lower Silver Creek and Flint Creek could provide suitable habitat for nesting migratory birds. No raptor or other perennial nests were observed during the surveys conducted by District staff as part of the biological assessment.

Construction activities associated with the proposed project would occur between January and December 2018. Project construction activities during the migratory bird nesting season (February 1 through August 31) could affect migratory birds by causing adults to abandon eggs or recently hatched young, which would be considered a significant impact. District BMP BI-5 (Avoid Impacts to Nesting Migratory Birds) would be implemented in order to ensure that any birds that may be nesting in the riparian corridor during construction activities would not be disturbed. BMP BI-5 requires pre-construction surveys for nesting birds and establishment of appropriate buffers to prevent

construction disturbance of the nest or its occupants. The bird surveys would be performed by a qualified biologist prior to initiating work that may occur during the bird nesting season. If active bird nests that are protected by the Migratory Bird Treaty Act and/or California Fish and Game Code are found during the surveys, a construction free buffer will be established and maintained around the nest until the young have fledged or the nest is inactive. Implementation of this BMP and applicable conditions for compliance with the VHP would ensure that impacts to nesting birds are less than significant.

b) ***Potentially Significant Impact Unless Mitigation Incorporated.*** Riparian habitat is present along the creeks within the project site. The majority of the riparian corridor along the northern bank of Flint Creek in the eastern portion of the project site is dominated by non-native trees with a manicured understory (e.g., mowed), while the riparian corridor in the western portion of the project site along Lower Silver Creek is characterized by dense willow stands intermixed with non-native trees.

A 170-foot portion of the proposed floodwall would be placed within the riparian corridor of Flint Creek resulting in approximately 0.003 acre of permanent impacts to the riparian corridor at the top of bank. The floodwall would consist of a 3-4 foot formed concrete wall with a reinforced concrete foundation placed to a depth of 10 feet resulting in approximately 33.06 cubic yards (CY) of fill placed at top of bank. In addition, floodwall construction would require excavation of approximately 507 CY of dirt resulting in temporary disturbance to approximately 0.06 acre (515 linear feet) of the riparian corridors along Lower Silver Creek and Flint Creek.

Table 4.2 lists the trees that are proposed to be removed for construction of the project and includes information on species type and whether the trees are considered native, riparian and/or subject to protection by city ordinance.

Table 4.2: Trees Proposed for Removal at the Project Site

Tree Species	Removed	Native	Ordinance Size Tree	Riparian Tree
Silver maple (*Acer saccharinum*)	17	No	0	0
Silver dollar gum (*Eucalyptus polyanthemos*)	7	No	3	0
Evergreen ash (*Fraxinus uhdei*)	1	No	0	0
Australian willow (*Giejara parviflora*)	10	No	0	0
Black walnut (*Juglans hindsii*)	1	No	0	0
Aleppo pine (*Pinus halepensis*)	21	No	15	4
Chinese pistache (*Pistacia chinensis*)	9	No	0	0
Western sycamore (*Platanus racemosa*)	3	Yes	1	0
Purpleleaf plum (*Prunus cerasifera*)	5	No	0	0
Bradford pear (*Pyrus calleryana*)	10	No	0	0
California pepper (*Schinus molle*)	7	No	6	1
Total Trees to Be Removed	**91**	**-**	**25**	**5**
Source: Hortscience 2016, Hortscience 2017, Santa Clara Valley Water District 2017.				

The proposed project would remove 61 existing trees within LCP; 47 trees would be removed to construct the raised levee and floodwall, and an additional 14 trees would be removed during relocation of the trash compactor and green waste collection area as well as construction of the new pedestrian path and park entrance. Among the 61 trees to be removed within LCP, 58 are non-native. An additional 30 street trees would be removed along Cunningham Avenue for equipment access. No trees would be removed during regrading of the trails near the Lake Cunningham shoreline. The trees to be removed are all located above the top of bank along Flint Creek or on the outboard side of the Lower Silver Creek levee. The top of bank is the uppermost extent of the streambank where bank slopes discernably break to or near the horizontal plane. The California Department of Fish and Wildlife jurisdiction in riparian habitats typically extends to the top of bank and may include trees beyond top of bank that depend on riparian processes or provide unique wildlife or habitat value. All trees to be removed above the top of bank would be non-native, upland trees that do not depend on riparian processes or provide wildlife value unique from adjacent upland trees. However, five of the trees to be impacted above the top of bank (all non-native trees) have substantial canopy overhanging the top of bank and could contribute allochthonous input to the riparian zone. These trees would likely be characterized as riparian trees.

In addition to the five riparian trees proposed to be removed, additional riparian trees may also suffer root damage (although unlikely) directly through mechanical injury and/or indirectly by compacting soil and altering soil structure, drainage, and biology from both heavy machinery and spoil storage. The removal of the five trees (Tree Tag Number: 237, 261, 268, 270, 277) determined to be within the riparian zone and potential damage to other riparian trees would reduce the number of trees in the riparian corridor and create openings in the forest canopy. These impacts would reduce the area of riparian habitat along Lower Silver and Flint Creeks, decreasing its habitat value, which would be a potentially significant impact.

Mitigation Measures BIO-3a, and BIO-3b (text provided below) are proposed to avoid or minimize the impacts to riparian habitat by implementing tree preservation measures during construction activities to maintain the health and vitality of the trees within and adjacent to the construction area. Mitigation Measure BIO-2 is proposed to replace any removed riparian trees, or trees subject to protection by the city ordinance at a minimum ratio of 1:1. District BMP BI-8 (Choose Local Ecotypes of Native Plants and Appropriate Erosion Control Seed Mixes) would also be implemented in order to ensure the landscaping, understory vegetation, and trees would be installed consistent with the surrounding neighborhood and City standards.

Implementation of the above District BMPs and Mitigation Measures BIO-2, BIO-3a and BIO-3b would reduce the impacts on the riparian habitat along Flint Creek and Lower Silver Creek to a level of less than significant.

c) ***No Impact.*** All project activities would occur in upland areas above the 100-year floodplain and outside the channels of Lower Silver and Flint Creeks**.** The proposed project would not require construction or otherwise impact any area below the ordinary high water mark which would be considered “waters of the United States” along Lower Silver Creek and Flint Creek. Approximately 0.25-acre of federal wetlands have been identified in the vicinity of the project area within the active floodplain at the confluence of Lower Silver Creek and Flint Creek. However, the proposed project would not result in direct construction disturbance of federal wetlands defined by Section 404 of the Clean

Water Act. District BMPs would be implemented to prevent flow of soil, debris, or other pollutants to creek waterways. Specifically, erosion and sediment control BMPs WQ-5 (Stabilizes construction and entrances and exits), WQ-9 (Use seeding for erosion control, weed suppression and site improvement), WQ-11 (Maintain clean conditions at work sites), WQ-15 (Prevent water pollution), and WQ-16 (Prevent stormwater pollution) would be implemented to ensure that pollutants would not flow into nearby wetlands along Lower Silver Creek, Flint Creek, or Ruby Creek. Thus, the project would also not indirectly affect federally protected wetlands through degradation of creek water quality. Therefore, there would be no impact.

d) ***Less than Significant Impact.*** LCP is surrounded by a perimeter chain-link fence which hinders the movement of animals from the project site to surrounding areas. The project would not change that restriction on animal movement as the section of chain-link fence along Cunningham Avenue would be replaced in-kind. The proposed concrete floodwall along Flint Creek would be parallel to the existing LCP perimeter fence line and located about 15 feet within the Park from the perimeter fence line. The floodwall would be no more than 3 feet in height for most of its length, increasing to 4 feet in height for short sections adjacent to the Cunningham Avenue Bridge over Lower Silver Creek, and the pedestrian bridge over Flint Creek. The floodwall would be shorter than the 8-foot tall park perimeter fence and would be a much smaller barrier than the nearby perimeter fence. Thus, the project would not increase barriers to wildlife movement. Animal dispersing during construction may avoid areas with temporarily high human activity and noise, but as soon as construction is completed, wildlife movement in any given area will return to its original condition. The proposed project would not interfere substantially with the movement of native resident or migratory species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. Therefore, the proposed project would have a less than significant impact on habitat connectivity and wildlife movement.

e) ***Potentially Significant Unless Mitigation Incorporated.*** Chapter 13.32, Tree Removal Controls, of the City of San Jose's Municipal Code protects both native and non-native trees that have a trunk of 56 inches or more in circumference (18 inches in diameter) at the height of 24 inches above the natural grade of slope. The City's Municipal Code prohibits the removal of any ordinance protected tree located on private property without first having obtained a permit from the City. In addition, any tree found by the City Council to have special significance can be designated as a heritage tree, regardless of tree size or species. It is unlawful to vandalize, mutilate, remove, or destroy heritage trees. The City of San Jose requires, prior to the issuance of any approval or permit for construction of any improvement, that trees are inventoried and categorized according to size, species, and location within an impacted area, as well as determining whether or not there are any heritage trees.

Hortscience completed an arborist report on behalf of the District in September 2016. An addendum letter to this report was prepared by Hortscience in June 2017 and an additional tree assessment was prepared by the Santa Clara Valley Water District in July 2017 to assess additional project impacts not previously evaluated (Appendix B). Based on review of the site plans, approximately 25 trees located within the project site are of sufficient size to be protected by the City tree ordinance and would be removed during project construction. The trees to be removed within the project are located within the LCP and roadway right-of-way owned by the City of San Jose. As the trees are located on public property, the City's tree ordinance does not apply to the trees planned for

removal. Thus, the proposed project would not conflict with any local policies or ordinances protecting biological resources including tree ordinance. However, as described in b) above, the District would replace any trees subject to protection by city ordinance at a minimum ratio of 1:1 (see Mitigation Measure BIO-2).

f) ***No Impact.*** The proposed project is located within the boundaries of the *Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan (VHP)*. The proposed project is a covered activity under the VHP. As a result, the applicable VHP conditions would have to be followed during project implementation. Those measures are identified in Section 2 of this document. Thus, the proposed project would not conflict with any provisions of an adopted HCP/NCCP or other conservation plan and would have no impact.

MITIGATION MEASURES

MM BIO-1: ***Pre-construction Survey and Relocation Procedures for San Francisco Dusky footed woodrats.*** The District shall conduct a pre-construction survey at the project site to determine the presence of San Francisco Dusky footed woodrat nests within 30 days prior to the start of ground disturbing activities. The survey shall cover the entire construction area, as well as a 50-foot buffer. If active nests are discovered during the pre-construction surveys, their nests shall be marked and a minimum 5-foot buffer shall be established to avoid disturbance. In situations where a 5-foot buffer is not feasible, a smaller buffer may be allowed if the qualified biologist believes the reduced-size buffer would result in less impact than relocating the nest.

If avoidance of active nests is not feasible, the nest may be relocated to suitable surrounding areas upon approval by the California Department of Fish and Wildlife (CDFW). Woodrats shall be evicted prior to removal of the nests and the onset of ground disturbing activities to avoid injury or mortality. A qualified biologist shall disturb the woodrat nest only after all woodrats leave the nest and seek refuge outside of the project activity area. Subsequently, the nest sticks shall be removed from the site. Relocation of the nest shall occur after sunset by a qualified biologist and the nest relocation area would be within 50 feet of the original nest location, if possible.

MM BIO – 2: ***Tree Replacement.*** For any city ordinance-protected trees removed by the project, the District shall replant native trees within LCP at a 1:1 ratio. Trees removed from the commonly identified riparian zone, shall be replaced at a minimum 1:1 ratio at or adjacent to the riparian corridors of Flint and Lower Silver Creeks and may be subject to additional compensatory mitigation requirements determined by the appropriate regulatory agencies. The details of species type removed, species type planted, planting locations, monitoring criteria, and adaptive management will be specified in a Mitigation and Monitoring Plan (MMP) completed by the District and subject to approval by the applicable regulatory agencies and the City of San Jose. The MMP will also include success criteria for tree establishment and growth characteristics.

MM BIO – 3a: ***Tree Preservation Prior to Construction Activities.*** The following measures shall be followed prior to construction activities:

- The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.
- Fence all trees to be retained in order to enclose the tree protection zone, prior to grubbing or grading activities. Fences shall be 6-foot chain-link or equivalent. Fences shall remain in place until all grading and construction is complete.
- Trees located within 5 feet of construction impact limits (see *Tree Protection Plan in the Arborist Report*) shall be protected from trunk damage by stacking hay bales around tree trunks (Photo 5).
- Apply a 6-12" layer of wood chip mulch along access routes to minimize soil compaction, root damage, and erosion caused by heavy machinery.
- Prune trees to be preserved to clean the crown of dead branches 1" and larger in diameter, and to raise canopies as needed for construction activities. Branches extending into the work area that can remain following demolition shall be tied back and protected from damage.
- Trees to be removed shall be felled so as to fall away from the tree protection zone and avoid pulling and breaking of roots of trees to remain. If roots are entwined, the Consulting Arborist may require first severing the major woody root mass before extracting the trees, or grinding the stump below ground.
- Tree(s) to be removed that have branches extending into the canopy of tree(s) or located within the tree protection zone of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker and not by the demolition contractor. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade.
- All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300). The Consulting Arborist shall provide pruning specifications prior to site demolition.
- All down brush and trees shall be removed from the tree protection zone either by hand, or with equipment sitting outside the tree protection zone. Extraction shall occur by lifting the material out, not by dragging across the ground. Brush shall be chipped and spread beneath the trees within the tree protection zone.
- Apply and maintain a 4-6" layer of wood chip mulch within the tree protection zone. Keep the mulch 2' from the base of tree trunks.

MM BIO-3b: ***Tree Preservation Activities During Construction Activities.*** The following measures shall be followed prior to construction activities:

- Any construction activities within the tree protection zone shall be monitored by the Consulting Arborist.
- All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved.
- All grading within the dripline of trees shall be done using the smallest equipment possible. The equipment shall operate perpendicular to the tree

and operate from outside the tree protection zone. Any modifications must be approved and monitored by the Consulting Arborist.

- Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Consulting Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2" in diameter should be avoided.
- If roots 2" and greater in diameter are encountered during site work and must be cut to complete the construction, the Consulting Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.
- Evaluate any injury to trees that should occur during construction. Notify the Consulting Arborist so that appropriate treatments can be applied.
- Spoil from trench, footing, or other excavation shall not be placed within the tree protection zone, neither temporarily nor permanently.
- Tree protection devices are to remain until all site work has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Consulting Arborist.
- Construction trailers, traffic and storage areas must remain outside the tree protection zone/fenced areas at all times.

5. CULTURAL RESOURCES

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?				✓
b) Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5?		✓		
c) Directly or indirectly destroy a unique paleontological resource or site?				✓
d) Disturb any human remains, including those interred outside of formal cemeteries?		✓		

ENVIRONMENTAL SETTING

Cultural Resources

A cultural resources investigation was conducted for the 2006 *Lake Cunningham Park Master Plan Amendme*nt by Archaeological Resource Management (December 2005). The cultural resource investigation included a records search that was conducted by the Northwest Information Center of the California Historical Resources Information System and a field survey of the LCP. In addition, as referenced in the City of San Jose *Draft Environmental Impact Report Lake Cunningham Park*, dated May 1977, City parks and recreation department staff prepared

the *Biological and Archaeological Field Surveys of the Lake Cunningham Site, in 1974*, which encompasses the project site.

The project site is located on fill from the excavation of Lake Cunningham that was used to form the levee along Lower Silver Creek and the berm along Flint and Ruby Creeks. It should also be noted that while creeks are usually considered sensitive archaeological areas, Lower Silver Creek was relocated from its original location during the excavation of Lake Cunningham. Soil at the proposed meadow and trash compactor relocation areas was graded and disturbed during construction of LCP. No cultural resources, prehistoric or historic, were identified on or near the project site from the records search in 2006 and review of the City of San Jose's EIR for Lake Cunningham Park project.

On April 20, 2017, the District notified the Muwekma Ohlone Indian Tribe, Ohlone Indian Tribe, Amah Mutsun Tribal Band, Indian Canyon Mutsun Band of Costanoan Tribe, and Amah Mutsun Tribal Band of Mission San Juan Bautista about the proposed project. Notification letters included a brief project description, project area map, and a request for any information the tribes might have regarding cultural resources in the project area vicinity. One response was received on April 20, 2017 from Chairperson Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista indicating artifacts and burial finds have been discovered in the vicinity of the project. The Amah Mutsun Tribal Band of Mission San Juan Bautista recommended that earth movement activities be monitored by a California trained archaeological monitor and a qualified trained Native American monitor. The Tribal Band also recommended that construction crews involved in earth moving activities receive cultural sensitivity training.

Paleontological Resources

The University of California Museum of Paleontology (UCMP) database was searched for fossils in Santa Clara County. According to the database search, no fossils were found in the vicinity of the project site.

DISCUSSION

a) ***No Impact.*** No historical resources as defined in §15064.5 were identified within or adjacent to the project site during previous cultural resource investigations prepared at the LCP. The proposed project is proposed on fill that was likely excavated from the Lake Cunningham basin and used to create the levee and berm along Flint and Ruby Creeks. As no historical resources are present, implementation of the project would not impact historical resources.

b) ***Potentially Significant Unless Mitigation Incorporated.*** Construction of the proposed project would involve earth moving activities in areas that have been previously disturbed for construction of the existing levee and the berm located along Lower Silver, Flint, and Ruby Creeks. Based on previous archaeological investigations completed for the LCP Master Plan and 1977 EIR for the City of San Jose's Lake Cunningham Park project, there is a low potential for the discovery of pre-historic or historic remains during construction activities. However, the Amah Mutsun Tribal Band of Mission San Juan Bautista has reported that artifacts and burial finds have been discovered in the vicinity of the project. Destruction or other substantial adverse change caused by excavation of undocumented tribal cultural resources during earthmoving activities in previously undisturbed soils could result in potentially significant impact to archaeological

resources. Therefore, although the potential for the discovery of pre-historic or historic resources is considered low, consistent with the Amah Mutsun Tribal Band of Mission San Juan Bautista recommendations, Mitigation Measures TCR-1 and TCR-2 are proposed to minimize potentially significant impacts from the destruction or other substantial adverse change caused by accidental discovery of undocumented tribal cultural resources. Implementation of Mitigation Measures TCR-1 and TCR-2 would ensure that impacts to archaeological resources would be less than significant.

c) ***No Impact.*** The proposed project would occur on fill that was likely excavated from the Lake Cunningham basin or disturbed areas that were graded during park construction. According to the UCMP database search, the project site is not known to contain paleontological resources. Therefore, the proposed project would result in no impact to paleontological resources.

d) ***Potentially Significant Unless Mitigation Incorporated.*** As described above, construction of the proposed project would occur in areas previously disturbed when the existing levee and berm were originally constructed. As such, the potential for encountering human remains during construction would be very low. Though unlikely, human remains could potentially be discovered during construction activities. Implementation of Mitigation Measures TCR-1 and TCR-2 would minimize potentially significant impacts from accidental discovery of undocumented burial remains; thus, impacts resulting from disturbance of human remains would be a less than significant impact.

MITIGATION MEASURES

MM TCR-1: ***Preconstruction Worker Awareness Training.*** All earthmoving construction personnel will receive cultural sensitivity awareness training that includes information on the possibility of encountering tribal cultural resources during construction, the types of artifacts likely to be seen, based on finds in the site vicinity, and the proper procedures in the event tribal cultural resources are encountered. Worker training will be prepared and presented by a qualified archaeologist with appropriate experience and expertise in teaching non-specialists. The awareness training will be conducted on-site at the start of construction and thereafter as required for new construction personnel.

MM TCR-2: ***Archaeological and Native American Construction Monitoring and Find Treatment.*** The District will retain a California trained professional archaeological monitor and a qualified trained Native American monitor for earthmoving activities within previously undisturbed soils. Construction monitoring will consist of observing operations and periodically inspecting disturbed, graded, and excavated surfaces. The monitor(s) will have the authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely.

If artifacts are discovered during construction, all work within 30 feet of the find will stop immediately until the qualified archaeological and Native American monitor(s) can assess the nature and importance of the find and recommend appropriate treatment pursuant to Section 21083.2 of the Public Resources Code and Section 15126.4 of the CEQA Guidelines. A “no work” zone will be established using appropriate flagging to delineate the boundary of this zone. If

the monitor(s) determine that the artifact is not significant, construction may resume. If the monitor(s) determine that the artifact is significant, the monitor(s) will determine if the artifact can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the monitor(s) will develop within 48 hours an Action Plan which will include provisions to minimize impacts and, if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines.

If burial finds are encountered during construction, work in affected areas will be restricted or stopped until proper protocols are met. Upon discovering any burial site as evidenced by human skeletal remains, the County Coroner will be immediately notified and the field crew supervisor shall take immediate steps to secure and protect such remains from vandalism during periods when work crews are absent. No further excavation or disturbance within 30 feet of the site or any nearby area reasonably suspected to overlie adjacent remains may be made except as authorized by the County Coroner, California Native American Heritage Commission, and site monitor(s).

6. GEOLOGY AND SOILS

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death related to: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?				✓
ii) Strong seismic ground shaking?			✓	
iii) Seismic-related ground failure, including liquefaction?			✓	
iv) Landslides?				✓
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			✓	

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓

ENVIRONMENTAL SETTING

This section is based on the following technical reports:

- *Geotechnical Investigation* – Review of a geotechnical investigation, which was prepared for the proposed project by Kleinfelder, Inc. in May 2015. The geotechnical investigation included six borings and test pit locations at the existing levee along Lower Silver Creek and adjacent to Flint/Ruby creek.
- *Santa Clara County Soil Survey* – A review of the *Soil Survey for Santa Clara County Area, Eastern Area* (Natural Resources Conservation Service 2016).

Regulatory Setting

The Alquist-Priolo Earthquake Fault Zoning (AP) Act was passed into law following the destructive San Fernando earthquake in 1971. The AP Act provides a mechanism for reducing losses from surface fault rupture on a statewide basis. The intent of the AP Act is to ensure public safety by prohibiting the siting of most structures for human occupancy across traces of active faults that constitute a potential hazard to structures from surface faulting or fault creep.

Regional Geologic Setting

The San Francisco Bay region is one of the most seismically active areas in North America and is dominated by the San Andreas Fault system. This fault system movement is distributed across a complex system of generally strike-slip right-lateral parallel and sub-parallel faults including San Andreas, San Gregorio, Hayward and Calaveras. A major earthquake at any of these sites could produce a strong ground shaking in the study area.

Local Geologic Setting

The project site is located on east side of the Santa Clara Valley on the Evergreen alluvial plain, a depression filled with Quaternary alluvial sediments (between recent and 1.8 million years old). The project site is drained by Lower Silver Creek, which eventually flows into Coyote Creek, a prominent north-flowing drainage course. The San Jose foothills, part of the Diablo range, border the project site to the east and a relatively flat San Jose plain lies to the west. The geologic structure of the Coast Ranges, which consist of northwest-trending folds and faults, controlled the development of the ridges and intervening valleys of the San Jose foothills (Kleinfelder 2015).

A lower-lying basin area known as Laguna Socayre existed in the project area and was a natural basin that supported mosaics of wetland habitats including wet meadows with saltgrass and alkali patterns, willow groves, and perennial freshwater wetlands, or lagunas (San Francisco Estuary Institute 2006). The wet meadows captured water and fine sediments, sands, silts and clays which predominately characterize the native soils underlying the area.

Liquefaction – Liquefaction is the transformation of saturated, loose, fine grained sediment to a fluid-like state because of earthquake shaking or other rapid loading. Soils most susceptible to liquefaction are loose to medium dense, saturated sands, silty sands, sandy silts, non-plastic silts and gravels with poor drainage, or those capped by or containing seams of impermeable sediment.

According to the geotechnical investigation, soils that meet one or more of the various criteria for liquefaction susceptibility tend to be located at or above the groundwater table, reducing the possibility for these soils to generate sufficient pore water pressure to trigger liquefaction. The soils at the project site are not saturated during "steady-state" conditions, which reduces the possibility for liquefaction. Therefore, based on the stratigraphy and groundwater conditions in the borings at the project site and the groundwater depth, the potential for liquefaction triggering and related hazards, including liquefaction-induced settlement and lateral spreading was found to be low (Kleinfelder 2015).

Alquist Priolo Fault Zone – The project site is not located within the State-designated Alquist-Priolo Earthquake Fault Zone, where site-specific studies addressing the potential for surface fault rupture are required, and no known active faults traverse the site (Kleinfelder 2015). The nearest Alquist-Priolo Earthquake Fault Zones are associated with the Evergreen fault and the Hayward fault, which are located less than a mile northeast and approximately 2 miles northeast of the site, respectively. Besides the Evergreen and Hayward faults, the nearest faults to the project site include the Lower Silver Creek fault, which is located 1½ miles to the southwest and the Quimby fault located approximately 1 mile to the northeast. The Lower Silver Creek fault and the Quimby fault are not considered active by the California Geologic Survey (CGS).

Seismicity - The project site and the entire San Francisco Bay Area is in a seismically active region subject to strong seismic ground shaking. Ground shaking is a general term referring to all aspects of motion of the earth's surface resulting from an earthquake, and is normally the major cause of damage in seismic events. The extent of ground-shaking is controlled by the magnitude and intensity of the earthquake, distance from the epicenter, and local geologic conditions. As described above, the closest active faults to the project site include the Evergreen and Hayward faults.

Soils - A large quantity of the soil generated by the excavation of the lake was used to build the levees/embankments along the creeks within the LCP. According to the Natural Resources Conservation Service (NRCS) web soil survey, soils along the levee at Lower Silver Creek are comprised of Urban Land-Newpark Complex and Urban Land-Still complex, 0 to 2 percent slopes and soils along Flint Creek are comprised of Urban land-Hangerone complex, 0 to 2 percent slopes, drained (NRCS 2016). The Urban Land-Newpark Complex is comprised of developed urban land and the Newpark soil series, which consists of very deep, moderately well drained soils that formed in alluvium from mixed rock sources. The Urban Land-Still complex is comprised of urban land and the Still soil series, which consists of very deep, well drained soils that formed in alluvium from mixed rock sources. They are typically found on flood plains and alluvial fans. The Urban Land-Hangerone complex is comprised of developed land and the Hangerone soil series, which consists of very deep, poorly drained soils that formed in alluvium from mixed rock sources.

The soil sampling conducted for geotechnical investigation revealed that the levee embankment fill is underlain by variable soils from firm sandy lean clay, lean clay with sand, and soft to firm sandy silt to sandy lean clay. Firm fat clay with sand was encountered in three of the borings below elevation 112 feet. However, at the boring located near the Lower Silver Creek channel, fat clay was encountered at a shallower depth. This soil was found to be moderately to highly compressible (compression index of 0.15) and slightly over consolidated. The historic, buried

creek channel may account for the presence of relatively thick and compressible fat clays at this location (Kleinfelder 2015).

DISCUSSION

ai) ***No Impact***. Surface rupture occurs when the ground surface is broken due to fault movement during an earthquake. The location of surface rupture generally can be assumed to be along an active or potentially active major fault trace. The project site is not located within a State designated Alquist-Priolo Earthquake Fault Zone or in the vicinity of an active fault, and therefore, the proposed project would not be subject to the rupture of a known earthquake fault. The project site does not include housing or other uses. The proposed project would not expose people working at the project site or structures to potential substantial adverse effects related to the rupture of a known earthquake fault. Therefore, the proposed project would have no impact.

aii) ***Less than Significant Impact.*** The major faults in the region that could cause ground shaking at the project site include the Evergreen fault and the Hayward fault, which are located less than a mile northeast and approximately 2 miles northeast of the site, respectively. The proposed project includes reconstruction of the existing levee along Lower Silver Creek and construction of a floodwall in the eastern portion of the project site along Flint Creek. Although seismic shaking may occur at or near the project site, the proposed project would be designed in accordance with the geotechnical investigation prepared for the proposed project to resist seismic forces. Conformance with the recommendations in the geotechnical investigation would minimize the potential effects of strong ground shaking. Therefore, this impact is considered a less than significant.

aiii) ***Less than Significant Impact.*** According to the geotechnical investigation prepared for the proposed project, the potential for liquefaction triggering and related hazards, including liquefaction-induced settlement and lateral spreading was found to be low. Therefore, impacts associated with seismic-related ground failure would be less than significant.

aiv) ***No Impact.*** The topography of the project site and surrounding area is generally level. The project site is not located within a landslide hazard zone. Therefore, the proposed project would result in no impact.

b) ***Less than Significant Impact.*** Construction of the raised levee, floodwall, and new pedestrian path, trail regrading, as well as relocation of the trash compactor and green waste collection area would require the clearing and grubbing of vegetation, including 91 trees, shrubs, and grassy ground cover at the approximately 4.2-acre project site. For construction of the levee, the proposed project would require the excavation of about 4,150 cubic yards of soil and the placement of about 12,240 cubic yards of engineered fill. Construction of the proposed floodwall would require the excavation and backfill of about 1,750 cubic yards of soil; the import and placement of 1,170 cubic yards of base material; and pouring of 648 cubic yards of concrete. Regrading of the trails near the Lake Cunningham shoreline would require excavation of about 40 cubic yards of soil, and site preparation at the trash compactor relocation area would require placement of about 150 cubic yards of fill. Grading and excavation activities could destabilize the soil and increase the erosion potential from water and wind.

District BMPs would be followed to prevent erosion and sedimentation from during construction activities. Refer to the Hydrology and Water Quality section of this document for discussion of potential erosion impacts associated with the proposed project. As documented in that section, application of recommended District BMPs WQ-5 (Stabilizes construction and entrances and exits), WQ-9 (Use seeding for erosion control, weed suppression and site improvement), and WQ-17 (Prevent stormwater pollution) would ensure that the proposed project does not result in substantial erosion and loss of topsoil during construction activities. Additionally, the project would obtain coverage for discharge of stormwater from the construction area under the Construction General Permit (Order 2009-0009-DWQ) issued by State Water Resources Control Board. The Construction General Permit requires preparation of a stormwater pollution prevention plan (SWPPP) by a qualified professional and implementation of the plan throughout the construction period, which would ensure proper site drainage and prevent the erosion of soils and loss of topsoil. The proposed project would have a less than significant impact.

c) ***Less than Significant Impact.*** The project area is nearly level and slope instability, landslides, lateral spreading or collapse would not be a significant hazard. Based on project geotechnical investigations performed for the project, soil at the project site is composed of stiff to firm clays that are not susceptible to liquefaction or significant subsidence. The proposed raised levee, floodwall, and concrete pads for the relocated trash compactor and green waste collection area will be constructed in accordance with geotechnical recommendations for site preparation and foundation design to minimize the potential for ground settlement or instability (Kleinfelder, 2015 and California Engineering and Geology, 2016). These measures would greatly reduce the potential for geologic hazards to affect the proposed project elements. Therefore, the proposed project would have a less than significant impact.

d) ***Less than Significant Impact.*** Expansion and contraction can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Expansive soils are common throughout California and can cause damage unless properly treated during construction. The geotechnical investigation states:

> *The surficial soils in the vicinity of the floodwalls consist of between 3 and 4 feet of fill comprised of clay soils with a high plasticity and high shrink-swell potential (Plasticity Indices of 42 and 44 percent) with a variable consistency ranging from stiff to hard. Below the fill soil, native alluvial soils were encountered and generally consisted of highly expansive clay soil similar in consistency and plasticity as the overlying fill soil* (California Engineering & Geology, 2016).

The Geotechnical Report recommends a combination of removing surface soils, properly compacting subsoil, and designing structural foundations and fill to reduce the potential for shrink-swell effects to acceptable levels. The recommendations of the Geotechnical Report would be incorporated into the project design to minimize this hazard. Therefore, impacts associated with expansive soils would be less than significant.

e) ***No Impact.*** The proposed project does not include the installation of septic tanks or alternative wastewater disposal systems. Therefore, the proposed project would not result in soils incapable of adequately supporting the use of septic tanks or other waste and no impact would occur.

7. GREENHOUSE GAS EMISSIONS

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purposed of reducing the emissions of greenhouse gases?				✓

ENVIRONMENTAL SETTING

A Greenhouse Gas Emissions (GHGs) analysis is incorporated herein and included in Appendix A. The analysis of greenhouse gas emissions is restricted to GHG emissions identified by Assembly Bill (AB) 32, which include carbon dioxide, methane, nitrous oxide (N_2O), hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride.

Greenhouse Gas Emissions

Gases that trap heat in the atmosphere are referred to as Greenhouse gas emissions (GHGs). The effect is analogous to the way a greenhouse retains heat. Common GHGs include water vapor, carbon dioxide, methane, NO_x, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit GHGs. The presence of GHGs in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a GHG compared with the reference gas, carbon dioxide. Individual GHG compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a GHG is a measure of how much a given mass of a GHG is estimated to contribute to global warming. To describe how much global warming a given type and amount of GHG may cause, the carbon dioxide equivalent is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing GHG emissions since it normalizes various GHG emissions to a consistent reference gas, carbon dioxide. For example, methane's warming potential of 21 indicates that methane has 21 times greater warming effect than carbon dioxide on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual GHG multiplied by its global warming potential.

GHGs defined by Assembly Bill (AB) 32 include carbon dioxide, methane, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride as described in Table 7.1: Description of Greenhouse Gases. A seventh GHG, nitrogen trifluoride (NF_3), was added to Health and Safety Code section 38505(g)(7) as a GHG of concern.

Table 7.1: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless greenhouse gas. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Hydrofluorocarbons	Hydrofluorocarbons are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is manmade and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Nitrogen trifluoride	Nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a GHG of concern. It	This gas is used in electronics manufacture for semiconductors and liquid crystal displays.

	has a high global warming potential of 17,200	
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.		

The State has begun the process of addressing pollutants referred to as short-lived climate pollutants. According to the CARB, short-lived climate pollutants are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants, such as carbon dioxide (CO_2). Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO_2. Reducing these emissions can make an immediate beneficial impact on climate change (ARB 2015d). Senate Bill 605, approved by the Governor on September 14, 2014 requires the ARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016. The CARB will complete an emission inventory of these pollutants, identify research needs, identify existing and potential new control measures that offer co-benefits, and coordinate with other state agencies and districts to develop measures.

The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. Fluorinated gases and methane are described in Table 7.1 and are already included in the California GHG inventory. Black carbon has not been included in past GHG inventories; however, CARB will include it in its comprehensive strategy.

Ozone is another short-lived climate pollutant that will be part of the strategy. Ozone affects evaporation rates, cloud formation, and precipitation levels. Ozone is not directly emitted so its precursor emissions—volatile organic compounds (VOC) and oxides of nitrogen (NO_x) on a regional scale and CH_4 on a hemispheric scale—will be subject of the strategy.

Black carbon is a component of fine particulate matter. Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating, prescribed burning of agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol; it comprises particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, in contrast to other GHGs that can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct effects include absorption of incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

Global warming potentials for black carbon were not defined by the IPCC in its Fourth Assessment Report. The CARB has identified a global warming potential of 3,200 using a 20-year time horizon and 900 using a 100-year time horizon from the IPCC Fifth Assessment. Sources of black carbon are already regulated by ARB, and by air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources (ARB 2015f). Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Water vapor is also considered a GHG. Water vapor is an important component of our climate system and is not regulated. Increasing water vapor leads to warmer temperatures, which causes more water vapor to be absorbed into the air. Warming and water absorption increase in a spiraling cycle. Water vapor feedback can also amplify the warming effect of other greenhouse gases, such that the warming brought about by increased carbon dioxide allows more water vapor to enter the atmosphere (NASA 2015).

Although there could be health effects resulting from changes in the climate and the consequences that can bring about, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses. At very high indoor concentrations (not at levels existing outside), carbon dioxide, methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen (CDC 2010 and OSHA 2003).

Regulatory Framework

Assembly Bill 32 - The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing GHGs (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an “ambitious but achievable” reduction in California’s GHG emissions, cutting approximately 30 percent from business as usual emission levels projected for 2020, or about 10 percent from today’s levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman, and child in California down to about 10 tons per person by 2020. In October 2010, ARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation is now estimated at 545 million $MTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010).

City of San Jose Greenhouse Gas Reduction Strategy - The City of San Jose adopted a Greenhouse Gas Reduction Strategy in June 2011. The City is currently in the process of drafting its City Council Policy for Greenhouse Gas Reduction Strategy Implementation. The Greenhouse Gas Reduction Strategy includes two approaches to reducing greenhouse gas emissions:

1) Specific City-sponsored initiatives and actions the City is taking over matters with which the City has direct control (e.g., Green Vision, implementation of the General Plan), and

2) Establishing policies to direct, guide or influence actions of third parties to implement and maintain consistency with the Strategy on a project-by-project basis.

Bay Area Air Quality Management District –The BAAQMD has not established significance thresholds for construction related GHG emissions. Although the project is not located within its boundaries, the Sacramento Metropolitan Air Quality Management District (SMAQMD) has set a significance threshold for construction GHG emissions. SMAQMD has established a significance threshold of 1,100 metric tons per year (MT/yr) of CO_2 equivalent emissions for significant construction-phase GHG emissions (SMAQMD, 2017). The District has

independently determined this threshold is supported by substantial scientific evidence and thus would be appropriate for use to determine level of GHG impact for this project.

DISCUSSION

a) ***Less than Significant Impact.*** The proposed project would generate greenhouse gas emissions during construction activities such as site grading, on-site heavy-duty construction vehicle use, vehicles hauling materials to and from the project site, and construction worker trips. The construction period would last up to 12 months in duration. These emissions are considered temporary or short-term.

Greenhouse gas emissions during project construction are presented in Table 7.2: Construction Greenhouse Gas Emissions. Detailed construction assumptions and parameters are provided in Appendix A.

Table 7.2: Construction Greenhouse Gas Emissions

Construction Phase	$MTCO_2e$
Site Preparation	10.22
Grading	36.69
Levee Construction	396.26
Floodwall Construction	215.59
Paving	22.37
Total	681.13
Source: CalEEMod version 2016.3.1	

Construction of the proposed project is estimated to generate a total of approximately 681 $MTCO_2e$. As discussed above, the District determined that it would be appropriate to determine significance relating to GHG emissions based on the SMAQMD's threshold of 1,100 metric tons per year (MT/yr) of CO_2 equivalent emissions for construction-phase GHG emissions. GHG emissions during project construction would be less than the SMAQMD significance threshold of 1,100 MT/yr. Therefore, GHG emissions generated during project construction would result in a less than significant impact.

The proposed project would not require additional employees or maintenance activities to maintain the existing flood protection infrastructure at LCP. Therefore, the proposed project would not result in an increase in GHG emissions during project operation.

Therefore, the proposed project would result in a less than significant impact.

b) ***No Impact.*** The City's Greenhouse Gas Reduction Strategy primarily addresses development projects or specific actions that would be undertaken by the City to reduce GHG emissions and does not include policies related to the use of diesel construction equipment which is the primary source of GHG emissions during construction activities. However, state regulations apply to most sources of project emissions. Haul trucks associated with construction activities are subject to the Low Carbon Fuel Standard and

regulations that apply to heavy-duty trucks. Construction employee vehicles are subject to the Pavley I and II/LEV III motor vehicles fuel efficiency standards. Off-road equipment is subject to the ARBs In-Use Off-road Vehicle Regulation. Since the proposed project would comply with applicable regulations, the project would be consistent with San Jose's Greenhouse Gas Reduction Strategy.

The proposed project is compared with the AB 32 Scoping Plan in order to determine compliance with any applicable plan, policy, or regulation adopted to reduce emissions of GHGs. The Scoping Plan contains a variety of strategies to reduce the State's emissions. The strategies in AB 32 are not applicable to the proposed project as shown in Table 7.3. The project is consistent with the Scoping Plan and would not conflict with applicable plans, policies, or regulations to reduce GHG emissions; therefore, the proposed project would result in no impact.

Table 7.3: Scoping Plan Measures Consistency Analysis

Scoping Plan Reduction Measure	Project Consistency
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	**Not Applicable.** The project is not a land use or industry that is required to comply with the Cap and Trade requirements.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**Not Applicable.** This is a statewide measure that cannot be implemented by a project applicant or the lead agency.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Not Applicable.** This is a measure for the State to increase its energy efficiency standards in new buildings. The project does not include construction or operation of a building.
4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	**Not Applicable.** This is a statewide measure that cannot be implemented by a project applicant or the lead agency.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	**Not Applicable.** This is a statewide measure that cannot be implemented by a project applicant or the lead agency.

6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	**Not Applicable.** Plan Bay Area is the regional transportation plan applicable to the project that is subject to the requirements of SB 375. Two major goals from the Plan Bay Area document are (1) reduce per-capita CO_2 emissions from cars and light-duty trucks by 15 percent by 2040; and (2) house 100 percent of the projected populations growth by income level. Plan Bay Area and SB 375 have no requirements that apply to construction projects.
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	**Not Applicable.** This is a statewide measure that cannot be implemented by a project applicant or the lead agency.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Not Applicable.** The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	**Not Applicable.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The proposed project would not preclude the implementation of this strategy.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	**Not Applicable.** This is a statewide measure that cannot be implemented by a project applicant or the lead agency.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	**Not Applicable.** This measure would apply to the direct greenhouse gas emissions at major industrial facilities emitting more than 500,000 $MTCO_2e$ per year. The project is not an industrial land use.
12. High Speed Rail. Support implementation of a high-speed rail system.	**Not Applicable.** This is a statewide measure that cannot be implemented by a project applicant or the lead agency.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Not Applicable.** The project does not include construction of a building.
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	**Not Applicable.** This measure is applicable to the high global warming potential gases that would be used by sources with large equipment (such as in air conditioning and commercial

	refrigerators). The project does not include air conditioning or refrigeration.
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero waste.	**Not Applicable.** Project operations would not result in generation of waste.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Not Applicable.** The project site is not forested; therefore, no preservation is possible.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	**Not Applicable. Project operations would not use water.**
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	**Not Applicable.** The project site is not designated or in use for agriculture purposes. No grazing, feedlot, or other agricultural activities that generate manure occur on-site or are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measure: California Air Resources Board 2008.	

8. HAZARDS AND HAZARDOUS MATERIALS

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Create a significant hazard to the public or the environment through the routine transport, use, storage or disposal of hazardous materials?			✓	
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			✓	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ mile of an existing or proposed school?			✓	
d) Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5, and as a result, would it create a significant hazard to the public or the environment?				✓

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing in or working in the project area?			✓	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				✓

ENVIRONMENTAL SETTING

Prior to 1948 the project site was in agricultural production until it was developed into a regional park in the 1970s.

The provisions in Government Code section 65962.5 are commonly referred to as the Cortese List. A site's presence on the list has bearing on compliance with CEQA. The Cortese list, which includes the resources listed below, was reviewed for references to the project site:

- List of Hazardous Waste and Substances sites from the Department of Toxic Substances Control (DTSC) EnviroStor database;
- List of Leaking Underground Storage Tank Sites from the State Water Resources Control Board (SWRCB) GeoTracker database;
- List of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit;
- List of "active" Cease and Desist Orders and Cleanup and Abatement Orders from SWRCB; and
- List of hazardous waste facilities subject to corrective action identified by DTSC.

According to the EnviroStor database, the nearest hazardous waste site is the Queens Cleaners, which is located at 2511 South King Road, San Jose, approximately 7 miles from the project site. This site is operating as a dry cleaner and is currently an active cleanup site. According to the GeoTracker database, the nearest open leaking underground storage tank to the project site is located at the Reid Hillview Airport located about 500 feet west of the project site. There are no solid waste disposal sites in the project vicinity with waste constituents above hazardous waste levels as identified by the SWRCB. According to the hazardous waste facilities subject to corrective action by DTSC, there are no hazardous waste facilities subject to corrective action that have been identified by DTSC.

Sensitive Receptors

Sensitive receptors located in the project vicinity include residential homes located approximately 90 feet north of the project site along Cunningham Avenue and Ocala Middle School, which is located approximately 500 feet north of the project site.

DISCUSSION

a, b) ***Less than Significant Impact.*** Construction of the proposed project would bring vehicles and construction equipment to the project site. No hazardous materials other than minimal quantities of fuels, coolants, and lubricants, would be used for construction activities. The inclusion of District BMPs HM-7 (Restrict vehicle and equipment cleaning to appropriate locations), HM-8 (Ensure proper vehicle and equipment fueling and maintenance), HM-9 (Ensure proper hazardous materials management), and HM-10 (Utilize spill prevention measures) would ensure that the potential for the release of hazardous material during construction would be minimized; this impact is considered to be less than significant.

c) ***Less than Significant Impact.*** The project site is located 500 feet south of Ocala Middle School located at 2800 Ocala Avenue. The proposed project would not emit hazardous emissions. As noted above, construction of the proposed project would utilize minimal quantities of fuels, coolants, and lubricants during construction activities. However, the District would implement a number of BMPs (see above) to minimize the potential of releasing hazardous materials during construction. Therefore, the proposed project would have a less than significant impact to the school.

d) ***No Impact.*** According to the DTSC EnviroStor database, there are no hazardous materials sites located in the project vicinity (DTSC 2015), including sites compiled pursuant to Government Code section 65962.5. Therefore, implementation of the proposed project is not anticipated to result in impacts from a listed hazardous materials site that would affect construction workers at the project site and would have no impact.

e) ***Less than Significant Impact.*** The nearest airport to the project site is the Reid-Hillview Airport, which is located approximately 500 feet west of the project site. The project site is located outside of the noise contours for the airport, but within the Traffic Pattern Zone (TPZ). The TPZ is the area that is routinely overflown by aircraft, where "the potential for aircraft accidents is relatively low and the need for land use restrictions minimal." The only restriction to land use within the TPZ is the development of sports stadiums or similar uses with very high concentration of people.

The proposed project would include a maximum of approximately 23 construction workers at the project site during the peak of construction activities, which would not be considered a high concentration of people. Therefore, the proposed project is not expected to result in a safety hazard to construction workers at the project site. The proposed project is also not anticipated to result in a substantial safety hazard for aircraft utilizing the airport as the proposed improvements would not affect airport operations. This impact is considered a less than significant impact.

f) ***No Impact.*** No private airports are located within 2 miles of LCP, and therefore no impacts would result.

g) ***No Impact.*** Access to the project site during construction would primarily be along Cunningham Avenue, which is two-lane paved street abutting the northern boundary of LCP. The project site is also adjacent to Capitol Expressway, which is a major arterial that runs north-south through the eastern portion of the City of San Jose. The proposed project would result in vehicle commute trips by construction workers, as well as haul trips for the import and export of fill and other construction materials to and from the project site. Most vehicle and equipment movements would occur at the construction area within LCP, but some trips by construction workers' commute vehicles, trucks delivering and removing equipment and supplies, and haul trucks would occur on local roads, primarily Cunningham Avenue and Capitol Expressway. External vehicle trips, including worker trips and vendor trips, would reach a maximum of up to 47 trips per day during the grading construction phase. In addition, a maximum average of approximately 10 haul trips per day would occur during the concurrent construction of the levee and floodwall. Temporary traffic controls, including temporary closure of portions of the traffic lanes on Cunningham Avenue, may be required, but the road would remain open at all times. Construction of the proposed project would not result in increased traffic volumes beyond the capacity of the local road network or cause substantial congestion on local roadways. Vehicle entrances to LCP located on Tully Road and South White Road would remain open for use by LCP staff and park users throughout the project construction. Traffic flow would be maintained on local streets at all times. Therefore, the proposed project would not impede emergency access to LCP or the surrounding area.

According to the *City of San Jose Emergency Operations Plan*, there are no designated emergency evacuation routes in the city. Therefore, implementation of the proposed project would not impair or interfere with an adopted emergency plan or emergency evacuation plan. Therefore, the proposed project would have no impact on emergency access to the project site.

h) ***No Impact.*** The project site is located within the LCP and is surrounded on three sides by urban uses. The project site is not located adjacent to wildlands and therefore would not expose people or structures to a significant risk of loss, injury or death involving wildland fires. Therefore, the proposed project would result in no impact from the exposure of people to the potential for wildland fires.

9. *HYDROLOGY AND WATER QUALITY*

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?			✓	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				✓
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of a course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site?			✓	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			✓	
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide additional sources of polluted runoff?			✓	
f) Otherwise substantially degrade water quality?			✓	
g) Place housing within a 100-year flood-hazard areas mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				✓
h) Place within a 100-year flood hazard area structures which would impede or redirect flows?				✓

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
j) Inundation by seiche, tsunami, or mudflow?				✓

ENVIRONMENTAL SETTING

Regional Setting

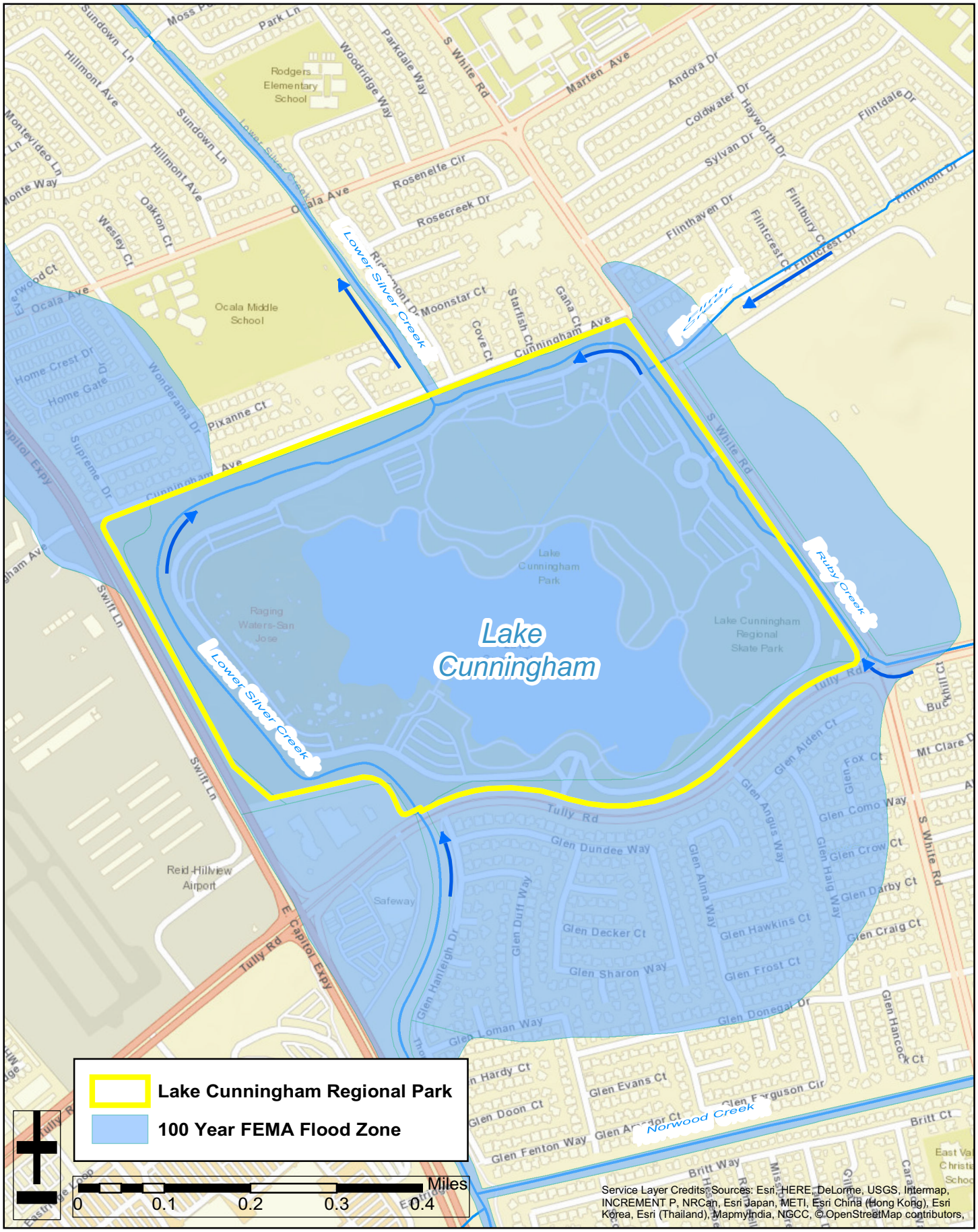
The project site is located in the Lower Silver Creek Watershed. The Lower Silver Creek Watershed encompasses an area of approximately 44 square miles and is in turn a sub-basin of the Coyote Watershed, which drains most of the west-facing slope of the Diablo Range. Nearly half of Lower Silver Creek's drainage basin (including the Flint Creek Watershed) is tributary to the LCP site, which drains into Lower Silver Creek downstream of Cunningham Avenue. Lower Silver Creek itself flows generally northward from Silver Creek Road at Barberry Lane to along the westerly perimeter of LCP to Coyote Creek near US-101 freeway/McKee Road interchange.

The Lower Silver Creek Watershed is approximately 5 miles wide at the downstream end and slowly narrows to a width of about 1 mile at its upstream end. The upper portion of the watershed is located in steep foothills while the lower portion is nearly flat. The upper portion has remained relatively undeveloped (i.e., rangelands to wildlife habitat) and the flatter area, about one-third of the watershed, is primarily urbanized (i.e., residential and commercial uses.)

Recorded flooding problems within the Lower Silver Creek Watershed include events in December 1889, January and March 1911, January 1952, December 1955, April 1958, January 1963, February 1983, and March 1983. During the El Niño storm of February 1998, the flow in Lower Silver Creek was at bank-full stage downstream (north) of LCP; no overtopping was witnessed.

Local Setting

The Lake Cunningham Regional Park was developed as a flood detention and reactional facility, which was designed and constructed in accordance with the 1976 LCP Master Plan. The park was planned to provide temporary storage of floodwaters from Lower Silver Creek, Flint Creek, and Ruby Creek. The District entered into a Joint Use Agreement with the City to construct the joint recreational-flood detention facility at the LCP site. The City granted the District an easement to all park lands and the District is responsible for the flood improvement measures in LCP which include the creeks, creek levees, and overflow weirs. Figure 6: 100-Year FEMA Flood Zone shows the 100-year flood zone of the Lake Cunningham Regional Park and the surrounding area.



Santa Clara Valley Water District

Figure 6: 100 Year FEMA Flood Zone

Lake Cunningham Flood Detention Certification Project

June 2017

Based on hydraulic modeling conducted for the proposed project, the flood detention facility at LCP would function as intended during a 100-year flood event. Floodwater would spill into the park, Big Meadow and lake; 2,243 cfs would be diverted into the park; the floodwater surface elevation in the park would be 132.75 feet NAVD, and 2,816 cfs would be released into Lower Silver Creek downstream of Cunningham Avenue. Lower Silver Creek's channel design can safely convey 2,816 cfs with adequate freeboard to meet FEMA certification requirements.

Regulatory Framework

The San Francisco Bay Regional Water Quality Control Board has adopted the San Francisco Bay Region Municipal Regional Stormwater NPDES Permit (MRP) for 76 Bay Area municipalities, including San Jose. The Municipal Regional Permit (NPDES Permit Number CAS612008) mandates the City of San Jose to use its planning and development review authority to require that stormwater management measures are included in new and redevelopment projects to minimize and properly treat stormwater runoff.

Provision C.3 of the MRP regulates the following types of development projects: projects that that create or replace 10,000 square feet or more of impervious surface and special Land Use Categories that create or replace 5,000 square feet or more of impervious surface.

The MRP requires regulated projects to include Low Impact Development (LID) practices, such as pollutant source control measures and stormwater treatment features aimed to maintain or restore the site's natural hydrologic functions. The MRP requires that stormwater treatment measures are properly installed, operated, and maintained.

The City has developed policies that implement Provision C.3, consistent with the MRP. The City's Post-Construction Urban Runoff Management Policy (6-29) establishes specific requirements to minimize and treat stormwater runoff from new and redevelopment projects. The City's Post- Construction Hydromodification Management Policy (8-14) establishes an implementation framework for incorporating measures to control hydromodification impacts from development.

The U.S. Environmental Protection Agency's (EPA) National Pollution Discharge Elimination System (NPDES) controls the discharge of pollutants to water bodies from point and non-point sources. In the Bay Area, this federal regulatory program is administered by the San Francisco Bay Regional Water Quality Control Board (RWQCB), which was expanded in 1990 to include permitting of stormwater discharges from storm sewer systems, industrial activities and construction sites that disturb more than one acre. Because the proposed project would disturb more than one acre of land during project construction activities, the District will need to comply with the requirements of the general NPDES stormwater permit for construction activities.

DISCUSSION

a, e, and f) ***Less than Significant Impact.*** Activities required to construct the proposed project, including site clearing, excavation, grading, fill placement and stockpiling, would have the potential to expose site soils to erosion and to mobilize sediments in stormwater. Additionally, hazardous materials such as fuels, oils, grease, and lubricants from construction equipment could be accidentally released during construction. Accidental discharge of these materials could adversely affect water quality and/or result in violation of water quality standards in the nearby Lower Silver Creek and Flint Creek. Erosion and sediment control BMPs WQ-4, WQ-5, WQ-6, WQ-9, WQ-11, WQ-15, and WQ-16 as

noted in Table 2.5 (Best Management Practices and Santa Clara Valley Habitat Plan Conditions) would be implemented to protect water quality. These include BMPs associated with sediment handling, erosion prevention, control of discharges and site management and clean up. In addition, the District would implement BMPs HM-7, HM-8, HM-9, and HM-10, which would prevent or minimize the potential for hazardous materials affecting water quality.

The National Pollutant Discharge Elimination System General Permit (GP) for Construction (Order 2009-009-DWQ) requires construction sites over one acre that do not qualify for a waiver to prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). As project construction would exceed one acre of ground disturbance, the District would prepare and implement a SWPPP and file a Notice of Intent with the Regional Water Quality Control Board (RWQCB) to obtain coverage under the GP. The SWPPP would incorporate BMPs to control sedimentation and runoff. A spill prevention and countermeasure plan would be incorporated into the SWPPP.

The proposed project would create about ~~36,800~~ 38,000 square feet of impervious surfaces. Of that amount, ~~35,500~~ 36,700 square feet (96%) would replace existing impervious surface to be removed by the project and 1,300 square feet, (4%) would be new impervious surfaces associated with the floodwall in the Flint Creek corridor. Because the project would create more than 10,000 square feet of new or redeveloped impervious surfaces, it would meet the definition of a regulated project that creates or replaces 10,000 square feet or more of impervious surfaces contained in the Municipal Regional Stormwater Permit NPDES No. CAS612008, Section C.3.b.ii(3). Regulated projects are required to comply with Low Impact Development (LID) principles. As stated in section 3.C.3 of the Municipal Regional Stormwater Permit:

> *LID is detaining, evapotranspiring, and/or biotreating stormwater runoff close to its source. LID employs principles such as preserving and recreating natural landscape features and minimizing imperviousness to create functional and appealing site drainage that treats stormwater as a resource, rather than a waste product. Practices used to adhere to these LID principles include measures such as rain barrels and cisterns, greenroofs, permeable pavement, preserving undeveloped open space, and biotreatment through rain gardens, bioretention units, bioswales, and planter/tree boxes.*

The project design incorporates LID Features in its design. The amount of impervious area is minimized and represents a small fraction of the project area. Additionally, storm runoff from all project elements are directed to vegetated areas to promote infiltration into the soil and trapping of pollutants before they flow to drainages. The project design conforms with LID requirements in the Municipal Regional Stormwater Permit. Thus, impacts due to the slight increase in impervious area resulting from the proposed project would not adversely affect water quality.

Including the implementation of the above-described District BMPs and compliance with the applicable construction and stormwater permit requirements, the project would not violate water quality standards or waste discharge requirements or otherwise substantially degrade water surface or groundwater quality. Also, the project would not significantly create or contribute runoff water which would exceed existing or planned drainage systems or provide significantly more additional source of polluted runoff. These impacts would be less than significant.

b) ***No Impact.*** The proposed project includes reconstruction of the existing levee along Lower Silver Creek and construction of floodwalls along Flint Creek. Construction of the proposed project would not result in substantial water use and therefore would not result in the depletion of groundwater supplies or interfere with movement of groundwater. Therefore, the proposed project would have no impact on groundwater in the area.

c, d) ***Less than Significant Impact.*** LCP in its existing condition, can temporarily detain stormwater flows during a 100-year flow event, which is a flow event that has 1% probability of occurring in any given year, and limit discharge to Lower Silver Creek downstream of LCP. The proposed project would modify the existing levees along the periphery of the LCP to provide the necessary freeboard to meet FEMA standards for certification of flood protection facilities. This would increase the margin of safety for detention of floodwaters at LCP during a 100-year flow event~~, which is a flow event that has 1% probability of occurring in any given year~~. During flows smaller than the 1% event, the proposed project would not change local drainage patterns or affect the hydrology of Lake Cunningham, Lower Silver Creek, Flint Creek, or Ruby Creek.

Based on hydraulic modeling conducted for the proposed project, the flood detention facility at LCP would function as intended during a 1% flow event. Floodwater would spill into the park, Big Meadow and lake; 2,243 cfs would be diverted into the park, reaching a floodwater surface elevation of 132.75 feet NAVD, and 2,816 cfs would be released into Lower Silver Creek downstream of Cunningham Avenue. Lower Silver Creek's channel design can safely convey 2,816 cfs with adequate freeboard to meet FEMA certification requirements. Therefore, the proposed project would not substantially alter the existing drainage pattern or affect the hydrology of the area potentially resulting in off-site flooding or substantial erosion or siltation on- or off-site.

~~The existing 36-inch storm-drain drain conveying stormwater from the Big Meadow to Lower Silver creek would remain and would not be affected by the proposed project.~~ The project proposes to ~~would~~ regrade trails near the Lake Cunningham shoreline to direct water overflowing from the lake onto the Big Meadow and ultimately to Lower Silver Creek when the lake surface elevation rises above 126 feet NAVD. Overflow from the lake onto the Big Meadow would be expected to occur on an infrequent basis approximately ~~only~~ once every 10 to 25 years ~~on average~~. The overflow water would flow to the existing 36-inch storm drain ~~discharging~~ which discharges flows from the Big Meadow to Lower Silver Creek. The existing storm drain has been designed to convey approximately 85 cfs from the Big Meadow to Lower Silver Creek during the 100-year flood event and would not be affected by the proposed project. As the frequency of overflows from the lake to the Big Meadow ~~water~~ would remain unchanged and occur ~~be conveyed along the regraded trails and into the Big Meadow~~ on an infrequent basis, and the storm drain to Lower Silver Creek has been designed to convey approximately 85 cfs to Lower Silver Creek, the regraded trails would not significantly alter surface drainage patterns, erosion or siltation, or the amount of water flowing in Lower Silver, Flint, or Ruby Creeks. As regrading of the trails near the Lake Cunningham shoreline would not significantly alter the drainage patterns and hydrology of the area, the proposed project would not result in on or off-site flooding or substantial erosion or siltation on- or off-site and impacts would be less than significant in this regard.

The proposed project would not result in a substantial increase in impermeable surfaces that could lead to a significant amount of runoff. The project would construct a new

asphalt pedestrian path at the northeast portion of LCP and relocate the trash compactor and green waste collection area, which are located on concrete slabs. Total impervious surfaces created during relocation of these facilities would be about ~~36,800~~ 38,000 square feet (see Table 9.1). However, project impervious surfaces would replace ~~35,500~~ 36,700 square feet existing impervious surfaces at LCP that would be removed. Replacement facilities would be nearly identical in size to the replaced facilities and the existing impervious surfaces would be removed; therefore, only about 1,300 square feet of new impervious surface area would be created. The small increase in impervious surfaces would be negligible when compared to the 202-acre size of LCP and would have a less than significant impact on the existing drainage pattern, hydrology of the area, and quantity of storm runoff which could induce substantial erosion or siltation or on or off-site flooding.

Table 9.1: New and Replacement Impervious and Semi-pervious Surfaces

Project Component	Surface Area (square feet)	
	New	Replacement
Floodwall	1,300	0
Raised Levee (semi-pervious levee crest road)	0	32,000
Relocated Trash Compactor and Green Waste Collection Area	0	2,000
Pedestrian Path	0	~~800~~ 2,000
Trail Regrading	0	700
Total	1,300	~~35,500~~ 36,700

Following construction activities, the soils would be compacted and recovered to be consistent with current topography. The amount of new impervious surface area would represent less than the overall area of the park (202 acres) and post-construction stormwater flow would be similar to pre-construction conditions. Based on the above information, the proposed project would not affect drainage capacity nor would it lead to a substantial addition of sources of runoff that could substantially alter the existing drainage pattern of the area. Thus, the proposed project would not result in substantial erosion or siltation on- or off-site or increase the rate or amount of surface runoff that would result in off-site flooding, and impacts would be considered less than significant.

g - j) ***No Impact***. The purpose of the proposed project is to raise the existing levee and construct a floodwall in order to meet the FEMA freeboard requirements. Once the proposed project and the Lower Silver Creek project are complete, a Letter of Map Revision (LOMR) will be prepared and submitted to FEMA to revise the applicable flood insurance rate maps. Completion of both the proposed project and the Lower Silver Creek project would provide 1% flood protection to more than 3,200 homes, businesses and schools in the Lower Silver Creek 1% floodplain near and north of LCP. As such, the proposed project would not expose people or structures within the 100-year flood zone. The topography of the project site is fairly level and the proposed project would not expose people or structures to mud flow. Based on the distance of the project site

from the San Francisco Bay and the size of Lake Cunningham, the proposed project would not be exposed to inundation by seiche. According to the Department of Conservation *Tsunami Inundation Maps*, the project site is not located in a tsunami inundation zone. Therefore, the proposed project would have no impact.

10. LAND USE AND PLANNING

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Physically divide an established community?				✓
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the policies of the general plan, specific plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				✓

ENVIRONMENTAL SETTING

The project site is located within LCP, which is a 202-acre water-oriented park, in the southeast section of the City of San Jose. The project site is designated Open Space, Parklands, and Habitat in the *Envision San Jose 2040 General Plan*.

The project site is bounded by Capitol Expressway to the west, Cunningham Avenue to the north, South White Road to the east, and Tully Road to the south. Surrounding land uses include: residential uses to the north and south; a car dealership to the southwest; the Reid-Hillview Airport to the west and a fallow field that was a former golf course to the east. Uses within the LCP include a water park (Raging Waters), open space areas, a marina, picnic areas, bike park, and a skate park.

DISCUSSION

a) ***No Impact.*** The project site is located within LCP and surrounded by urban uses (e.g., Reid-Hillview Airport, residential uses, etc.). The proposed project would raise a portion of the existing Lower Silver Creek Levee, construct a new floodwall along the alignment of an existing berm, replace some fencing along Cunningham Avenue, relocate trash compactor and green waste collection area, and regrade existing trails along Lake Cunningham. These project elements would not obstruct existing roads, streets or paths, with the exception of the pedestrian path at the northwest corner of LCP. This new path would be constructed approximately 80 feet south to accommodate the proposed project floodwall. The new path would be the similar in size and capacity to

the existing path, and would connect to South White Road a short distance from where the removed path connects to Cunningham Avenue. Both the existing and the new pedestrian entrances at the northwest portion of LCP would be within 80 feet of the intersection of Cunningham Avenue and South White Road. The shifting of the path would not hinder access to the park or divide the community. Therefore, the proposed project would have no impact.

b) ***Less than Significant Impact.*** The project site is located on a District easement within the LCP on land owned by the City of San Jose. The project site is designated Open Space, Parklands, and Habitat in the *General Plan***.**

The *Lake Cunningham Regional Park Feasibility Report* (City of San Jose 2008) identifies a perimeter pathway along the park interior that would provide visitors with a complete walking loop around the lake. Portions of the existing levee are identified as a 12-foot wide paved pathway. Reconstruction of the existing levee would result in a 10-foot wide access road on top of the levee. However, the proposed project would not preclude the City from installing a trail along the existing maintenance road in the future.

The *Lower Silver Creek Trail Master Plan* identifies a trail connection at the Lake Cunningham Regional Park at the Cunningham Avenue/South White Road intersection where the existing pedestrian connection is located. Due to the design of the proposed floodwall, the proposed project would relocate the existing pedestrian entrance to approximately 80 feet southeast of its existing location in order to connect to the existing pedestrian bridge to the park. However, the proposed changes would not conflict with the Lower Silver Creek Trail Master Plan as the proposed project would continue to maintain the trail connection to the LCP. Therefore, the proposed project would result in no impact.

c) ***No Impact.*** The proposed project is a covered activity in the Santa *Clara Valley Habitat Plan* (VHP), which is a joint habitat conservation plan and natural communities conservation plan developed to serve as the basis for the issuance of incidental take permits and authorizations pursuant to Section 10 of the federal Endangered Species Act and the California Natural Community Conservation Planning Act. All activities associated with the proposed project must be implemented consistent with the requirements outlined in the VHP. The proposed project would comply with the applicable conditions in the VHP. Therefore, there would be no impact related to conflict with an existing habitat conservation plan or natural community conservation plan**.**

11. MINERAL RESOURCES

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				✓

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Result in the loss of availability of locally-important mineral resources recovery site delineates on a local general plan, specific plan, or other land use plan?				✓

ENVIRONMENTAL SETTING

According to the *Geologic Map of Santa Clara County*, which shows Mineral Deposits within the County of Santa Clara, the project site does not contain any mineral resources. Neither the State Geologist nor the State Mining and Geology Board has classified any areas except the Communications Hill area in the City of San Jose as containing mineral deposits that are of statewide significance or for which the significant requires further evaluation. Communications Hill is located about 4.3 miles west-southwest of the project area

DISCUSSION

a, b) ***No Impact.*** The project site does not contain any mineral resources. The closest mineral resources are over 4 miles away and would not be affected by the proposed project. The proposed project also would not involve development or recovery of mineral resources, Therefore, the proposed project would result in no impact on mineral resources.

12. NOISE AND VIBRATIONS

Would the project result in:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			✓	
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			✓	
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	

Would the project result in:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			✓	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓

ENVIRONMENTAL SETTING

Typical activities associated with construction are highly noticeable temporary noise sources. Noise from construction activities are generated by two primary sources: (1) the transport of workers and equipment to construction sites; and (2) the noise related to active construction equipment. These noise sources can be a nuisance to local residents and businesses or unbearable to sensitive receptor

Noise is usually defined as unwanted sound. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3.0 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3.0 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive.

Existing Noise Sources

The primary source of noise in the project vicinity is from vehicular traffic on Capitol Expressway and South White Road, which carry large volumes of traffic (over 20,000 vehicles per day). Noise is also present from airplane flights into Reid-Hillview Airport located west of the project site, as well as recreational uses at the LCP.

Sensitive Receptors

According to *Envision San Jose 2040 General Plan,* noise sensitive land uses generally include residences, hotels and motels, hospitals, recreation areas, schools, nursing homes, churches, libraries, and long-term medical or mental health facilities (City of San Jose, 2011). In the project vicinity, noise sensitive uses include residential uses located to the north across Cunningham Avenue approximately 90 feet from the project boundary. The closest school to the project site is located approximately 500 feet north of the project site.

Regulatory Framework

The applicable noise standards governing the proposed construction activities are the noise criteria listed in the City's Municipal Code and General Plan.

City of San Jose Municipal Code Noise Ordinance - The City has incorporated the following measures in its Municipal Code to control construction noise: Section 20.100.450, Hours of construction within 500 feet of a residential unit:

A. Unless otherwise expressly allowed in a development permit or other planning approval, no applicant or agent of an applicant shall suffer or allow any construction activity on a site located within 500 feet or a residential unit before 7:00 a.m. or after 7:00 p.m., Monday through Friday, or at any time on weekends.

B. Without limiting the scope of Section 20.100.310, no applicant or agent of an applicant shall suffer or allow any construction activity on a site subject to a development permit or other planning approval located within 500 feet of a residential unit at any time when that activity is not allowed under the development permit or planning approval.

C. This section is applicable whenever a development permit or other planning approval is required for construction activity.

Envision San Jose 2040 General Plan - The City has incorporated the following policy in the Environmental Considerations (EC)/Hazards section of the General Plan related to construction noise.

> <u>Environmental Considerations Hazards Policy (EC)-1.7</u> - Require construction operations within San Jose to use best available noise suppression devices and techniques and limit construction hours near residential uses per the City's Municipal Code. The City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial or office uses would:
>
> - Involve substantial noise generating activities (such as building demolition, grading, excavation, pile driving, use of impact equipment, or building framing) continuing for more than 12 months.
>
> For such large or complex projects, a construction noise logistics plan that specifies hours of construction, noise and vibration minimization measures, posting or notification of construction schedules, and designation of a noise disturbance coordinator who would respond to neighborhood complaints will be required to be in place prior to the start of construction and implemented during construction to reduce noise impacts on neighboring residents and other uses.

DISCUSSION

a) ***Less Than Significant Impact.*** The City of San Jose does not have maximum noise level standards for construction equipment. Therefore, the project's compliance with permitted hours of construction as specified in the City's noise ordinance and other applicable policies incorporated in the *Envision San Jose 2040 General Plan* determines significance. As noted in the project description, the proposed project would be constructed between the hours of 7:00 AM and 7:00 PM Monday through Friday, and 8:00 AM to 5:00 PM Saturday, as needed. Therefore, the proposed project may not be in compliance with the City of San Jose noise ordinance (Section 20.100.450 of the *City of San Jose Municipal Code*) and would require additional City approvals should weekend construction be needed. Sensitive noise receptors are located within 500 feet of the proposed construction areas. Specifically, existing single-family homes are located approximately 90 feet from where construction activities would occur. It should be noted Saturday construction would only be performed as needed if construction falls behind schedule. If the District determines that Saturday construction would be necessary, the District would comply with the City ordinance to obtain a permit from the City to allow for weekend construction.

The nearest potentially sensitive noise receptors to the project site are residences located approximately 90 feet north of the project site across Cunningham Avenue. Noise generating activities would be in proximity to these noise sensitive receptors when levee reconstruction occurs on the northern portion of the project site adjacent to Cunningham Avenue, as well as when construction of the proposed floodwall occurs in the eastern portion of the project site. Park users at LCP may also be temporarily be exposed to noise during construction activities, but noise would be intermittent. San Jose's General Plan Goal EC-1.7 states that the City considers significant construction noise impacts to occur if a project located within 500 feet of residential uses or 200 feet of commercial uses would involve substantial noise generating activities continuing for more than 12 months. As described in the Project Description, construction would occur over a period of not more than 12 months.

As discussed above, if the District determines Saturday construction is necessary, the District would obtain the appropriate permit from the City. In addition, the City of San Jose Envision 2040 General Plan Noise Policy EC1.7 does not apply to the proposed project as construction activities would occur for less than 12 months. This impact would be less than significant.

b) ***Less Than Significant Impact.*** Vibration refers to groundborne noise and perceptible motion. Groundborne vibration is almost exclusively a concern inside buildings where the motion may be discernable, and is rarely perceived as a problem outdoors.

To minimize noise and vibration impacts to residential uses located in the project vicinity, the proposed project would construct the proposed floodwall on a foundation of cast in drill hole (CIDH) piles. The CIDH piles would be installed at approximately 15 to 20 piles/day depending on the groundwater conditions. CIDH piles eliminate hammering by using large augers to drill a hole into which a steel frame is placed. The drilled hole and steel frame insert are then filled with concrete to create cast-in drilled-hole columns or piles. As piles would be utilized along the entire length of the floodwall, the activities would take up to 90 days.

The use of footings or CIDH piles, which utilize the pre-auguring method or steel torque-down piles would not be expected to result in any adverse construction noise or vibration impacts as no pounding effects would occur. Therefore, the adjacent residential homes to the north of the project site would not be exposed to groundborne noise and motion during construction activities, which would be considered a less than significant impact.

c) ***Less than Significant Impact.*** Substantially more vehicular traffic or other operational noise would not occur after the proposed project is constructed. Thus, the proposed project would result in ambient noise levels similar to noise levels expected under existing conditions. Therefore, this impact is considered less than significant.

d) ***Less than Significant Impact.*** Construction activities associated with the proposed project would temporarily elevate noise levels in the project vicinity from the use of construction equipment and an increase in vehicle trips over a construction period of approximately 12 months. Construction related worker, vendor, and haul trips, as shown in Table 2.2 and Table 2.3, would vary throughout the construction period; however, the highest number of worker/vendor trips would occur during grading activities with an estimated maximum of 47 trips per day and the highest number of haul trips would be associated with levee and floodwall construction with an estimated average of 10 haul trips per day.

Typical noise levels generated from construction equipment would be a maximum of 85 dB measured at a distance of 50 feet from the use of graders and excavators during construction activities. These noise levels would occur intermittently during project construction. Recreational and residential uses would also be exposed to intermittent noise form truck trips from the hauling of materials to and from the project site. The nearest sensitive receptors to the project site are located approximately 90 feet north across Cunningham Avenue and at similar distances within LCP. Sound that is radiated from a point source drops at 6 dB per doubling of distance (Federal Transit Administration, 2006). Construction noise levels at nearby residential and recreational uses would therefore be approximately up to 79 dB during the loudest construction noise events. Those noises would occur intermittently during construction. In addition, the project site is located near Capitol Expressway, a major arterial, as well as Cunningham Avenue, and South White Road. According to *Envision San Jose 2040 General Plan,* major arterials are the most significant noise sources at land uses immediately adjoining these roadways. Noise levels observed at areas adjacent to other major arterials in the surrounding area ranged from 70-74 dBA in day-night average sound level (Ldn). Immediately west of Capitol Expressway is the Reid-Hillview Airport which is also a significant source of environmental noise to the adjacent properties. Given that the project site is located in close proximity to noise generating land uses and construction noise would be intermittent, it is anticipated the proposed project would not contribute to a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing.

Construction trucks, including haul trucks and trucks delivering materials and equipment, would use Cunningham Avenue to access the project construction area. Assuming that trucks pass by residences at an approximate distance of 50 feet, dump trucks may generate temporary noise levels of up to 77 dBA, and haul trucks up to 84 dBA (FTA 2006). Although the ambient noise levels on side streets is not high, each instance of increased noise from truck traffic would be limited to the time it takes for the truck to start out and to pass receptors, which would be less than 10 seconds per instance. The noise

generated by construction trucks would only occur for short intervals of time. Even if all project truck trips per day were to pass the same residential location, they would affect that residential receptor less than 1% of the 24-hr day, which would not result in an increase of 3 dB or more in Ldn or raise the ambient Ldn to greater than 65 dB.

Therefore, the proposed project would have a less than significant impact on surrounding areas with respect to temporary increase in ambient noise levels.

e) ***Less than Significant Impact.*** The nearest airport to the project site is the Reid-Hillview Airport, which is located approximately 500 feet west of the project site across Capitol Expressway. The project site is not within the runway approach or departure zones, therefore, aircraft would not routinely fly at low elevation over the project site. Workers would be exposed to aircraft noise. However, the project site is located outside of the noise contours for the airport and therefore the proposed project would not expose people residing or working at the project site to excessive noise levels. The proposed project would have a less than significant impact in regards to exposure of construction workers to aircraft noise.

f) ***No Impact.*** The project site is not located in the vicinity of a private airstrip. Therefore, implementation of the proposed project would not expose people to excessive noise levels from aircraft, and no impact would occur.

13. POPULATION AND HOUSING

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Induce substantial growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure) that was not anticipated in approved local or regional planning documents?				✓
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c) Displace substantial numbers of existing people, necessitating the construction of replacement housing elsewhere?				✓

ENVIRONMENTAL SETTING

The project site is located at the LCP on an easement held by the District. An existing residential neighborhood is located to the north of the project site across Cunningham Avenue.

DISCUSSION

a) ***No Impact.*** The proposed project does not include any new housing, commercial or industrial space, which may result in the conversion of adjacent land uses. In addition, the proposed project would not provide additional major infrastructure or increase the capacity of the existing water system. In their current condition, the levees and berms along the northern and western boundary of LCP can detain the amount of water required to prevent downstream flooding of Lower Silver Creek during a 1% flooding event. The proposed project would only provide the FEMA -required three feet of freeboard but would not increase flood protection downstream of LCP beyond the 1% flooding event. Further, urbanized areas along Lower Silver Creek downstream of LCP are entirely built out. Therefore, the proposed project would not directly or indirectly induce substantial population growth and would have no impact.

b, c) ***No Impact.*** Construction of the proposed project would not require demolition of any existing housing or displace any persons, and thus would not and necessitate construction of replacement housing. Therefore, the proposed project would have no impact.

14. PUBLIC SERVICES

Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any public service:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Fire protection?				✓
b) Police protection?				✓
c) Schools?				✓
d) Parks?				✓
e) Other public facilities?				✓

ENVIRONMENTAL SETTING

The project site is located within LCP in the City of San Jose and would utilize existing services provided by the City including the following:

<u>*Fire Protection*</u> - Fire protection services in San Jose are provided by the San Jose Fire Department (SJFD). The SJFD responds to all fires, hazardous materials spills, and medical emergencies in the City. The SJFD protects 206 square miles and approximately 1.2 million

residents. Emergency response is provided by 30 engine companies, nine truck companies, one urban search and rescue company, one hazardous incident team company, and numerous specialty teams and vehicles. Currently, 33 active fire stations are located in the City. The closest fire station to the project site is Station #21, which is located at 1749 Mt. Pleasant Road located approximately a half mile from the project site.

Police Protection - Police protection services are provided by the City of San Jose Police Department (SJPD). The SJPD employs over 1,300 sworn officers. Police headquarters are located at 201 West Mission Street. The City also has a police substation in south San Jose and three community policing centers.

Schools - The City of San Jose includes 22 public school districts that currently operate 222 public schools serving students in San Jose. The project site is located within the Alum Rock Union Elementary School District.

The closest school to the project site is Ocala Middle School, which is located at 2800 Ocala Avenue, approximately 500 feet north of the project site.

Parks - The City of San Jose manages a total of 3,435 acres of regional and neighborhood/community serving parkland. The City also provides open space lands that are managed by the City, or another public agency and are open to the public for recreation uses including picnicking, fishing, non-motorized boating, bicycling, horseback riding and permitted environmental education programs.

The project site is located within the boundaries of the LCP, which is a 202-acre regional park operated by the City

DISCUSSION

a - e) ***No Impact.*** As described in section 13 above, the proposed project would not induce substantial growth in population, and thus would not result in an increased need for services relating to fire protection, police protection, schools, park and other public facilities. In addition, the proposed project would result in a similar level of maintenance activities to ensure channel capacity compared to current condition. Therefore, the proposed project would have no impact on police protection, fire protection, schools, parks, or other public facilities in the project vicinity.

15. RECREATION

	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				✓

	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction of expansion of recreational facilities, which might have an adverse physical effect on the environment?			✓	

ENVIRONMENTAL SETTING

The City of San Jose manages a total of 3,435 acres of regional and neighborhood/community serving parkland. The City also provides open space lands that are managed by the City, or another public agency and are open to the public for recreation uses including picnicking, fishing, non-motorized boating, bicycling, horseback riding and permitted environmental education programs.

The project site is located on District easement within the Lake Cunningham Regional Park, which is owned and operated by the City of San Jose Parks Recreation and Neighborhood Services. Lake Cunningham Regional Park is a 202-acre regional park that includes a 50-acre lake and offers a marina, playground, and picnic areas. The City recently constructed a skate park as well as a bike park.

Trails

The *County-wide Trails Master Plan* (Santa Clara County Parks & Recreation Department, 1995), *City of San José 2020 General Plan*, and *San José's Greenprint Strategic Plan* (2000) identify a network of trails throughout the city. The designated alignments for the future Lower Silver Creek Trail and Thompson Creek Trail lead to Lake Cunningham Park.

The *Lower Silver Creek Trail Master Plan* identifies a trail connection at the Lake Cunningham Regional Park at the Cunningham Avenue/South White Road intersection where the existing pedestrian connection is located.

The City of San Jose prepared the *Lake Cunningham Regional Park Feasibility Report* (Feasibility Report) in order to identify a perimeter pathway along the parks interior; determine ways to connect these paths to uses adjacent to the park, including regional trail systems and transit stops, identify additional park access points, and evaluate the feasibility of accommodating dedicated sports fields at the Big Meadow. The Feasibility Report identifies a 12-foot wide asphalt path with two-foot-wide base rock shoulders along Lower Silver Creek.

DISCUSSION

a) ***Less than Significant Impact****.* The proposed project consists of reconstruction of the existing levee along Lower Silver Creek, construction of a floodwall along Flint Creek, and regrading trails along Lake Cunningham at LCP. Park users may be temporarily affected by construction activities (e.g., noise and traffic); however, this disturbance

would be short-term and intermittent. While public access would be temporarily restricted at areas under active construction for safety reasons, these areas represent only 2% of the total LCP area. Construction would occur at undeveloped portions of the park and all major amenities (e.g., Raging Waters, Regional Skate Park, Big Meadow picnic areas) would remain open throughout construction. After construction is complete, public access and recreational opportunities would be the same as under current conditions. The regraded trails between Lake Cunningham and the Big Meadow would be less than 1 to 2 feet below existing grade and have gentle side slopes. The newly graded trails would be available for recreational use after construction. The proposed project would not substantially diminish recreational opportunities at LCP, either during or after project construction. The proposed project would not increase the use of other nearby recreational facilities such that substantial physical deterioration of the facilities would occur or be accelerated. Therefore, this would be considered a less than significant impact.

b) ***Less than Significant Impact.*** The proposed project would not include the construction of recreational facilities as part of the project. However, due to the design of the proposed floodwall, the proposed project would relocate the existing pedestrian entrance to the park from the corner of the intersection of Cunningham Avenue/South White Road to approximately 80 feet south along South White Road in order to connect to the existing pedestrian bridge to the park. However, the modification in the pedestrian entrance would not result in an adverse physical change to the park. Therefore, this would be considered a less than significant impact.

16. TRANSPORTATION/TRAFFIC

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths and mass transit?			✓	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			✓	

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
d) Substantially increase hazards due to design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			✓	
e) Result in inadequate emergency access?				✓
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance of such facilities?			✓	

ENVIRONMENTAL SETTING

The project site is bounded by Tully Road on the south, Capitol Expressway on the west, Cunningham Avenue on the north, and South White Road on the east. Regional access to the project site is provided by U.S. 101, I-680, and Capitol Expressway. Local access is provided by Tully Road, South White Road, and Cunningham Avenue. Tully Road is a four- to six-lane arterial that extends east from central San Jose to Ruby Avenue, east of the park. South White Road is a four- to five lane roadway that runs mainly north-south between Aborn Road and Penitencia Creek Road.

Cunningham Avenue is a two-lane, east-west roadway that borders the project site to the north and would provide the primary access to the project site during construction activities.

Existing Pedestrian and Bicycle Facilities

Pedestrian access to the site is provided by sidewalks on both sides of Tully Road, Capitol Expressway, and Cunningham Avenue in the project area. Sidewalks are also located along the west side of South White Road. Bicycle access is provided by class II bike lanes on Tully Road, South White Road, Cunningham Avenue as well as Ocala and Marten Avenues. Bikes are permitted on Capitol Expressway although there are no bike lanes.

Existing Transit Service

Bus service in the project vicinity is provided by the Santa Clara Valley Transportation Authority (VTA). VTA operates several bus routes in the project vicinity, along Capitol

Expressway and South White Road. The nearest bus stop to the project site is located on South White Road near the entrance to Lake Cunningham Park.

DISCUSSION

a, b) ***Less than Significant Impact.*** Construction activity associated with the proposed project would generate short-term increase in vehicle trips from construction workers and haul trucks transporting material to and from the project site on area roadways. Over the course of construction, the level of activity would vary. However, the greatest number of trips would occur during the grading phase and during reconstruction of the levee. Raising the Lower Silver Creek levee would generate approximately 1,025 one-way haul trips based on a 16-cubic yard capacity of a haul truck for a total of 2,050 haul truck trips during construction of the levee. Construction of the floodwall component of the proposed project would generate approximately 13 one-way haul trips based on a 16-cubic yard capacity of the standard haul truck for a total of 26 total haul trips. During grading activities, a typical construction crew would include approximately 23 worker trips per day and 24 vendor trips per day. In addition, a maximum average of approximately 10 haul trips per day, dispersed throughout the day, would occur during the concurrent construction of the levee and floodwall.

Access to project site during construction would be accomplished using existing roads including Capitol Expressway and Cunningham Avenue. Construction trips would connect with Interstate 680 and Highway 101 to deliver materials via Capitol Expressway from Cunningham Avenue. The primary access point into the project site would be located along Cunningham Avenue just west of Cunningham Avenue bridge at the existing access gate to the levee. The staging area (e.g., parking of equipment, storing of any construction materials including fill and rock) would occur along the existing levee and move as construction progresses with a final staging area located west of the Cunningham Avenue bridge on the reconstructed levee.

The project-generated traffic would be temporary and therefore would not result in any long-term degradation in traffic operating conditions (i.e., permanent increases in congestion) on any roadway segments or intersections in the project vicinity. The main off-site impacts from the movement of construction trucks would include short-term and intermittent lessening of roadway capacities due to slower movements and larger turning radii of trucks compared to passenger vehicles. In addition, vehicles could experience short term delays if they were traveling behind a construction truck. Therefore, although project-generated traffic would contribute to localized congestion near the project site, impacts to the performance of the circulation system and travel demands would be temporary and short-term in nature.

Construction-related truck traffic during the AM (8:00 to 9:00 AM) and PM (4:00 to 6:00 PM) peak hours would coincide with peak-period traffic volumes on area roadways and therefore have the greatest potential to impede traffic flow. Project-related hauling and deliveries would be dispersed throughout the day, which would lessen the effect on peak-hour traffic on the roadway segments and intersections in the project vicinity with the exception of worker commute trips, which would typically occur during the AM and PM peak hour. The proposed project would result in a maximum of 23 worker trips per day during the grading phase that would likely coincide with the AM and PM peak hours.

According to the *Lake Cunningham Bike Park Initial Study/Mitigated Negative Declaration* (City of San Jose 2016) intersections in the project vicinity currently operate at level of service (LOS) D or better. Based on the number of trips per hour, the proposed project is not anticipated to create a substantial increase in traffic in relation to the planned or designated traffic load and capacity of the intersections and roadway segments in the project vicinity (City of San Jose, 2016). The proposed project may involve temporary lane closures along Cunningham Avenue when construction of the floodwall commences. However, the proposed project would implement District BMP TR-1: Incorporate Public Safety Measures, which would ensure that fences, lights, flagging, guards, and signs are installed as determined appropriate by the City of San Jose in order to give adequate warning to the public of the construction and of any dangerous condition to be encountered as a result thereof.

Impacts from truck traffic during peak traffic hours would be less than significant as haul trips and deliveries would be dispersed throughout the day and would not result in a degradation of the existing level of service along intersections and roadway segments in the project vicinity. Long-term maintenance to ensure channel capacity within the project area is anticipated to generate no increase in worker trips (identical to current operation and maintenance activity). Therefore, given the temporary nature, minimal traffic anticipated on intersections and roadway segments in the project vicinity, as well as the incorporation of District BMP TR-1 (Incorporate Public Safety Measures) as part of the proposed project, this impact is considered less than significant.

c) ***No Impact****.* The project would not affect air traffic routes or patterns. There would be no impact.

d) ***Less than Significant Impact.*** The proposed project would not include new design features (e.g., new facilities or obstructions within public roadways) or alterations of existing features (e.g., road realignment). No incompatible uses or hazardous design features are associated with operation of the proposed project. Construction of the proposed project would result in heavy vehicles and equipment accessing project site via local roadways, including Cunningham Avenue. The presence of large, slow-moving equipment among the traffic on roadways in the project vicinity could result in temporary safety hazards. Construction equipment would be primarily located off the roadways except for the delivery to the project site. Implementation of BMP TR-1 (Incorporate Public Safety Measures), which requires fencing, barriers, lights, flagging, guards and/or signs (as appropriate) to provide warning to the public of construction activities, would minimize the effects from construction traffic on the roadway network. Given the equipment needed to implement the proposed project (see Table 2.4: Proposed Construction Equipment), construction operations, and the amount of haul trips, traffic safety hazards would not be substantially increased over existing conditions and therefore the impact would be considered less than significant.

e) ***Less than Significant Impact***. Access to the project site during construction would primarily be along Cunningham Avenue in the northern portion of the project site. The project site is also adjacent to Capitol Expressway, which is a major arterial that runs north-south through the eastern portion of the City of San Jose. The proposed project would result in vehicle commute traffic, as well as haul trips for the import and export of fill and materials. Construction of the proposed project would not result in substantial temporary traffic delays, as traffic flow would be maintained even if temporary lane closures are required for some activities during construction activities. Therefore,

implementation of the proposed project is not anticipated to impede emergency access to the surrounding area.

In addition, according to the *City of San Jose Emergency Operations Plan*, there are no designated emergency evacuation routes in the city. Therefore, implementation of the proposed project would not impair or interfere with an adopted emergency plan or emergency evacuation plan. Therefore, the proposed project would have a less than significant impact on emergency access to the project site.

f) ***Less than Significant Impact.*** The *Lower Silver Creek Trail Master Plan* identifies a trail connection to the LCP at the corner of Cunningham Avenue/South White Road where the existing pedestrian connection is located. Due to the design of the proposed floodwall, the existing pedestrian entrance would be relocated to approximately 80 feet to the south on South White Road in order to connect to the existing pedestrian bridge. However, relocation of the pedestrian entrance would continue to provide a northeastern entrance into the park and the proposed change would be consistent with the *Lower Silver Creek Trail Master Plan*. The relocated path and entrance would be similar in size and surface to the existing asphalt path. Alternative transport access to the park would be unaffected.

The *Lake Cunningham Regional Park Feasibility Report* (City of San Jose 2008) identifies a perimeter pathway along the interior of the park in order to provide a complete walking loop around the lake. Portions of the existing levee are identified as a 12-foot wide paved pathway in the Feasibility Report. Reconstruction of the existing levee would result in a 10-foot wide access road on top of the levee. However, the proposed project would not preclude the City from installing a trail along the existing lower maintenance road in the future. Therefore, the proposed project would be consistent with the plan.

The proposed project may result in the temporary closure of the sidewalks and bicycle lanes on Cunningham Avenue during construction of the proposed project. However, the proposed project would not have any long-term impacts on any existing bicycle lanes or bus stops in the project vicinity. Therefore, the proposed project would have a less than significant impact on alternative transportation.

17. TRIBAL CULTURAL RESOURCES

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in the Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to the Native American tribe, and that is:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources code section 5020.1(k), or				✓
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.		✓		

REGULATORY SETTING

Assembly Bill (AB) 52, which was passed in September 2014, creates a new category of environmental resources, i.e., tribal cultural resources, that much be considered under CEQA. In addition, AB 52 requires lead agencies to provide notice to tribes that are traditionally and culturally affiliated with the geographic area of a proposed project if they have requested notice of projects proposed within that area. If the tribe requests consultation within 30 days upon receipt of the notice, the lead agency must consult with the tribe.

Tribal cultural resource (TCR) is defined by Section 21074 of the Public Resources Code (PRC) as a site, feature, place, cultural landscape, sacred place or object with cultural value to a California Native American tribe, which may include non-unique archeological resources. Tribal cultural resources could include those listed on the California Register of Historical Resources (CRHR) or a local historical registry; or a resource determined by a lead agency to be a significant tribal cultural resource, based on substantial evidence. Tribal cultural resources could also include non-archaeological resources (e.g., sacred mountains), as well as cultural landscapes.

DISCUSSION

a) ***No Impact****:* The project area is completely within the area disturbed during construction of Lake Cunningham during the 1970s. Based on searches of state and local historic

registries and filed investigations, no resources listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources are present in the project area.

b) ***Potentially Significant Unless Mitigation Incorporated:*** On April 20, 2017, the District notified the Muwekma Ohlone Indian Tribe, Ohlone Indian Tribe, Amah Mutsun Tribal Band, Indian Canyon Mutsun Band of Costanoan Tribe, and Amah Mutsun Tribal Band of Mission San Juan Bautista about the proposed project. Letters included a brief project description, project area map, and a request for any information the tribes might have regarding cultural resources in the project area vicinity. One response was received on April 20, 2017 from Chairperson Zwierlein of the Amah Mutsun Tribal Band of Mission San Juan Bautista indicating artifacts and burial finds have been discovered in the vicinity of the project. Destruction or other substantial adverse change caused by excavation of undocumented resources during earthmoving activities in previously undisturbed soils could result in potentially significant impact to TCRs.

The Amah Mutsun Tribal Band of Mission San Juan Bautista recommended that earth movement activities be monitored by a California trained archaeological monitor and a qualified trained Native American monitor. The Tribal Band also recommended that construction crews involved in earth moving activities receive cultural sensitivity training. Consultation between the District and Amah Mutsun Tribal Band of Mission San Juan Bautista is ongoing. Consistent with the Tribe's recommendations, Mitigation Measures TCR-1 and TRC-2 are proposed to minimize potentially significant impacts from the destruction or other substantial adverse change caused by accidental discovery of undocumented TCRs. Implementation of Mitigation Measures TRC-1 and TRC-2 would reduce impacts on TCRs to less than significant.

MITIGATION MEASURES

MM TCR-1: ***Preconstruction Worker Awareness Training.*** All earthmoving construction personnel will receive cultural sensitivity awareness training that includes information on the possibility of encountering tribal cultural resources during construction, the types of artifacts likely to be seen, based on finds in the site vicinity, and the proper procedures in the event tribal cultural resources are encountered. Worker training will be prepared and presented by a qualified archaeologist with appropriate experience and expertise in teaching non-specialists. The awareness training will be conducted on-site at the start of construction and thereafter as required for new construction personnel.

MM TCR-2: ***Archaeological and Native American Construction Monitoring and Find Treatment.*** The District will retain a California trained professional archaeological monitor and a qualified trained Native American monitor for earthmoving activities within previously undisturbed soils. Construction monitoring will consist of observing operations and periodically inspecting disturbed, graded, and excavated surfaces. The monitor(s) will have the authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely.

If artifacts are discovered during construction, all work within 30 feet of the find will stop immediately until the qualified archaeological and Native American monitor(s) can assess the nature and importance of the find and recommend

appropriate treatment pursuant to Section 21083.2 of the Public Resources Code and Section 15126.4 of the CEQA Guidelines. A “no work” zone will be established using appropriate flagging to delineate the boundary of this zone. If the monitor(s) determine that the artifact is not significant, construction may resume. If the monitor(s) determine that the artifact is significant, the monitor(s) will determine if the artifact can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the monitor(s) will develop within 48 hours an Action Plan which will include provisions to minimize impacts and, if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines.

If burial finds are encountered during construction, work in affected areas will be restricted or stopped until proper protocols are met. Upon discovering any burial site as evidenced by human skeletal remains, the County Coroner will be immediately notified and the field crew supervisor shall take immediate steps to secure and protect such remains from vandalism during periods when work crews are absent. No further excavation or disturbance within 30 feet of the site or any nearby area reasonably suspected to overlie adjacent remains may be made except as authorized by the County Coroner, California Native American Heritage Commission, and site monitor(s).

18. UTILITIES AND SERVICE SYSTEMS

Would the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
c) Exceed the wastewater treatment requirements of the applicable Regional Water Quality Control Board?			✓	
d) Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
e) Require or result in construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			✓	
f) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			✓	

Would the project:	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Result in a determination by a wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	
h) be served by a landfill with sufficient capacity to accommodate the project's solid waste disposal needs/?			✓	
i) Comply with federal, state, and local statutes and regulations related to solid waste?			✓	

ENVIRONMENTAL SETTING

A variety of local and regional purveyors in this area provide and maintain utility and service system facilities associated with electricity, water, stormwater, wastewater, solid waste, communications and natural gas in the City of San Jose. Several of these utilities are located within the project site including underground PG&E gas and electrical transmission lines and AT&T communication lines and the City's storm drain system.

Water

Water service is provided to the City of San Jose by three water retailers. The City of San Jose Municipal Water System (SJWS) provides water to North San Jose, Evergreen, and parts of Edenvale and Coyote Valley. The District manages water resources and provides wholesale treated water to the 13 water retailers in Santa Clara County.

A three-inch City water line is located in the northeast portion of the project site near the intersection of South White Road and Cunningham Avenue.

Wastewater

The City's sanitary sewer system includes approximately 2,200 miles of sewer pipelines ranging from 6 to 90 inches in diameter. The San Jose/Santa Clara Water Pollution Control Plant is a regional wastewater treatment facility serving eight tributary sewage collection agencies and is administered and operated by the City of San Jose's Department of Environmental Resources.

Solid Waste

According to the *Envision San Jose 2040 General Plan*, the City of San Jose currently generates1.7 million tons of solid waste annually. In 2008, approximately 60 percent of the waste generated was diverted through a variety of programs including, residential curbside

recycling and yard trimmings collection programs, civic recycling, and the construction demolition and diversion program. According to the Santa Clara County Integrated Waste Management Plan (IWMP), the County has adequate disposal capacity beyond 2022.

A trash compactor that serves the LCP and several other parks in the project vicinity is located at the corner of Cunningham Avenue and South White Road and operated by the City of San Jose Parks and Neighborhood Services Department (PRNS).

DISCUSSION

a, b, d, and e) ***Less than Significant Impact.*** The proposed project includes reconstruction of the existing levee along Lower Silver Creek and construction of floodwalls along Flint Creek. Construction of the proposed project would require potable or reclaimed water during construction activities (e.g., for dust suppression). However, the amount of water required would be minimal and would be distributed to the site via water trucks. Wastewater may be generated during construction activities by the workers at the project site, but it would be minimal. Therefore, construction of the proposed project would not result in substantial water use and would not generate a significant amount of wastewater during construction activities. The project would not generate wastewater during operation. Therefore, the proposed project would not result in the need for new, relocated, upgraded, or expanded water or wastewater facilities and would result in a less than significant impact.

c) ***Less than Significant Impact.*** The proposed project would result in an increase of 1,300 square feet of impervious surfaces. This slight increase in impervious surfaces is not anticipated to affect the amount of on-site runoff and therefore would not lead to the expansion of existing stormwater facilities. This impact is less than significant.

f, g) ***Less than Significant Impact.*** Implementation of the proposed Project would generate solid waste associated with construction activities, including construction materials, trench spoils, and general refuse, which would be disposed of at a local landfill. Recycling of materials would be utilized as much as possible. The closest landfill to the project site is the Zanker Materials Recovery Center and Landfill (approximately seven miles northwest). The Zanker Materials Recovery Center and Landfill has a remaining disposal capacity of 700,000 cubic yards and a permitted rate of 350 tons per day. Given the small amount of construction waste that would be generated by the proposed project and the remaining capacity available at the Zanker Road Landfill, the proposed project would be served by a landfill with sufficient permitted capacity to accommodate the proposed project's solid waste disposal needs. The proposed project would not generate additional waste once completed. Impacts related to solid waste disposal are therefore considered less than significant.

19. MANDATORY FINDINGS OF SIGNIFICANCE

Does the project:	**Potentially Significant Issues**	**Potentially Significant Unless Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		✓		
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)			✓	
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			✓	

a) ***Potentially Significant Impact Unless Mitigation Incorporated.*** The project would potentially have a significant impact on riparian habitat as well as the San Francisco Dusky-Footed Woodrat through removal of approximately 40 mature trees in close proximity to the Flint Creek riparian corridor. Implementation of the mitigation measures BIO-1, BIO-2, and BIO-3a and -3b would reduce these impacts to less than significant by requiring pre-construction surveys for sensitive species, protecting trees from construction harm to the maximum extent possible, and replanting riparian trees within the Flint Creek riparian corridor.

Potentially significant impacts to archaeological and tribal cultural resources have been identified. However, implementation of specific mitigation measures defined in the Cultural Resources and Tribal Cultural Resources sections would reduce potential impacts to a less than significant level. Important examples of the major periods of California history and prehistory would not be eliminated.

b) ***Less Than Significant Impact.*** Section 15130[b] [1] [A] of the CEQA Guidelines requires a discussion of significant environmental impacts that would result from project-related actions in combination with “closely related past, present, and probably future projects: located in the immediate vicinity. Cumulative environmental impacts are those

impacts that by themselves may not be significant, but when considered with impacts occurring from other projects in the vicinity would result in a cumulative impact. Related projects considered to have the potential of creating cumulative impacts in association with the proposed project consist of projects that are reasonably foreseeable and that would be constructed or operated during the life of the proposed project.

The proposed project would be located within an existing park in an urban neighborhood that is developed with residential and municipal uses on three sides. No other projects are anticipated to occur in the immediate area while the proposed project is constructed. As described herein, impacts associated with the proposed project would be temporary and construction-related and would be either less than significant or less than significant with mitigation. With the implementation of applicable BMPs and mitigation measures, the proposed project would not make a considerable contribution toward a cumulative impact.

c) ***Less Than Significant***. As described, the proposed project's potential environmental effects have been analyzed. Potential impacts to aesthetics, population/housing, transportation/traffic, public services, utilities/service systems, air quality, hydrology/water quality, noise, and recreation, which could result in substantial adverse effects on human beings, either directly or indirectly, have been determined to be less than significant. Therefore, the proposed project would not result in a substantial adverse effect to human beings.

SECTION 5: REPORT PREPARATION

This section lists those individuals who contributed to the preparation of this Initial Study/Mitigated Negative Declaration.

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Personal Communication

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Appendix A

Air Quality and Greenhouse Gas Analysis Report

Cunningham Flood Detention Facility Certification

Bay Area AQMD Air District, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
User Defined Industrial	5,500.00	User Defined Unit	8.00	5,500.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	64
Climate Zone	4			**Operational Year**	2020
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	641.35	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Linear project measuring 5,500 feet in length and covering 8.0 acres in area.

Construction Phase - January 1 to December 31, 2018 construction schedule with concurrent levee and floodwall construction.

Off-road Equipment -

Off-road Equipment - Engineer-provided estimates based on past District projects.

Off-road Equipment - Engineer-provided estimates based on past District projects.

Grading - Engineer-provided estimates based on past District projects.

Off-road Equipment -

Off-road Equipment - Engineer-provided estimates based on past District projects.

Off-road Equipment - Engineer-provided estimates based on past District projects.

Trips and VMT - Engineer-provided estimates based on past District projects.

Vehicle Trips - No operational changes.

Fleet Mix - No operational changes.

Consumer Products - No operational changes.

Area Coating -

Water And Wastewater - No operational changes.

Solid Waste - No operational changes.

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	ReapplicationRatePercent	10	0
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	40	15
tblConstructionPhase	NumDays	230.00	231.00
tblConstructionPhase	NumDays	230.00	150.00
tblConstructionPhase	PhaseEndDate	12/31/2017	12/31/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	2/9/2018
tblConstructionPhase	PhaseEndDate	12/31/2017	11/23/2018

tblConstructionPhase	PhaseEndDate	12/31/2017	1/12/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	2/10/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	1/13/2018
tblConstructionPhase	PhaseStartDate	1/1/2018	10/29/2018
tblFleetMix	HHD	0.02	0.00
tblFleetMix	LDA	0.57	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.3710e-003	0.00
tblFleetMix	MCY	5.9420e-003	0.00
tblFleetMix	MDV	0.11	0.00
tblFleetMix	MH	8.1200e-004	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	2.5450e-003	0.00
tblFleetMix	SBUS	8.7700e-004	0.00
tblFleetMix	UBUS	2.4420e-003	0.00
tblGrading	AcresOfGrading	10.00	4.00
tblGrading	AcresOfGrading	0.63	0.00
tblLandUse	BuildingSpaceSquareFeet	0.00	5,500.00
tblLandUse	LandUseSquareFeet	0.00	5,500.00
tblLandUse	LotAcreage	0.00	8.00
tblOffRoadEquipment	HorsePower	402.00	189.00
tblOffRoadEquipment	HorsePower	402.00	189.00
tblOffRoadEquipment	HorsePower	402.00	189.00
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders

tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Rollers
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Excavators
tblOffRoadEquipment	OffRoadEquipmentType		Graders
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentType		Sweepers/Scrubbers
tblOffRoadEquipment	OffRoadEquipmentType		Bore/Drill Rigs
tblOffRoadEquipment	OffRoadEquipmentType		Off-Highway Trucks
tblOffRoadEquipment	OffRoadEquipmentType		Skid Steer Loaders
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00

tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	2.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	0.00	1.00
tblOffRoadEquipment	PhaseName		Levee Construction
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tblOffRoadEquipment	PhaseName		Site Preparation
tblOffRoadEquipment	PhaseName		Floodwall Construction
tblOffRoadEquipment	PhaseName		Floodwall Construction
tblOffRoadEquipment	PhaseName		Floodwall Construction

Cunningham Flood Detention Facility Certification - Bay Area AQMD Air District, Annual

tblProjectCharacteristics	OperationalYear	2018	2020
tblSolidWaste	LandfillCaptureGasFlare	94.00	0.00
tblSolidWaste	LandfillNoGasCapture	6.00	0.00
tblTripsAndVMT	HaulingTripNumber	0.00	2,050.00
tblTripsAndVMT	HaulingTripNumber	0.00	26.00
tblTripsAndVMT	VendorTripNumber	1.00	4.00
tblTripsAndVMT	VendorTripNumber	0.00	24.00
tblTripsAndVMT	VendorTripNumber	0.00	12.00
tblTripsAndVMT	VendorTripNumber	1.00	14.00
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	EMFAC_Mix
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	EMFAC_Mix
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	EMFAC_Mix
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	EMFAC_Mix
tblTripsAndVMT	VendorVehicleClass	HDT_Mix	EMFAC_Mix
tblTripsAndVMT	WorkerTripNumber	2.00	8.00
tblTripsAndVMT	WorkerTripNumber	2.00	4.00
tblTripsAndVMT	WorkerVehicleClass	LD_Mix	EMFAC_Mix
tblTripsAndVMT	WorkerVehicleClass	LD_Mix	EMFAC_Mix
tblTripsAndVMT	WorkerVehicleClass	LD_Mix	EMFAC_Mix
tblTripsAndVMT	WorkerVehicleClass	LD_Mix	EMFAC_Mix
tblTripsAndVMT	WorkerVehicleClass	LD_Mix	EMFAC_Mix
tblVehicleTrips	CC_TL	7.30	0.00
tblVehicleTrips	CNW_TL	7.30	0.00
tblVehicleTrips	CW_TL	9.50	0.00
tblWater	AerobicPercent	87.46	0.00
tblWater	AnaDigestCombDigestGasPercent	100.00	0.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00

tblWater	ElectricityIntensityFactorForWastewaterTreatment	1,911.00	0.00
tblWater	ElectricityIntensityFactorToDistribute	1,272.00	0.00
tblWater	ElectricityIntensityFactorToSupply	2,117.00	0.00
tblWater	ElectricityIntensityFactorToTreat	111.00	0.00
tblWater	SepticTankPercent	10.33	100.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.4542	5.1871	3.0561	7.3600e-003	0.0431	0.2279	0.2709	0.0113	0.2097	0.2210	0.0000	676.5662	676.5662	0.1823	0.0000	681.1224
Maximum	**0.4542**	**5.1871**	**3.0561**	**7.3600e-003**	**0.0431**	**0.2279**	**0.2709**	**0.0113**	**0.2097**	**0.2210**	**0.0000**	**676.5662**	**676.5662**	**0.1823**	**0.0000**	**681.1224**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2018	0.4542	5.1871	3.0561	7.3600e-003	0.0418	0.2279	0.2696	0.0112	0.2097	0.2209	0.0000	676.5655	676.5655	0.1823	0.0000	681.1217
Maximum	**0.4542**	**5.1871**	**3.0561**	**7.3600e-003**	**0.0418**	**0.2279**	**0.2696**	**0.0112**	**0.2097**	**0.2209**	**0.0000**	**676.5655**	**676.5655**	**0.1823**	**0.0000**	**681.1217**

	ROG	**NOx**	**CO**	**SO2**	**Fugitive PM10**	**Exhaust PM10**	**PM10 Total**	**Fugitive PM2.5**	**Exhaust PM2.5**	**PM2.5 Total**	**Bio- CO2**	**NBio-CO2**	**Total CO2**	**CH4**	**N20**	**CO2e**
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**3.00**	**0.00**	**0.48**	**1.23**	**0.00**	**0.06**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	**1-1-2018**	**3-31-2018**	0.3907	0.3907
		Highest	0.3907	0.3907

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0263	4.7000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.0983	0.0983	2.6000e-004	0.0000	0.1049
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0263**	**4.7000e-004**	**0.0509**	**0.0000**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0983**	**0.0983**	**2.6000e-004**	**0.0000**	**0.1049**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0263	4.7000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.0983	0.0983	2.6000e-004	0.0000	0.1049
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0263**	**4.7000e-004**	**0.0509**	**0.0000**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0983**	**0.0983**	**2.6000e-004**	**0.0000**	**0.1049**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Cunningham Flood Detention Facility Certification - Bay Area AQMD Air District, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2018	1/12/2018	5	10	
2	Grading	Grading	1/13/2018	2/9/2018	5	20	
3	Levee Construction	Building Construction	2/10/2018	12/31/2018	5	231	
4	Floodwall Construction	Building Construction	4/2/2018	10/26/2018	5	150	
5	Paving	Paving	10/29/2018	11/23/2018	5	20	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 4

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Floodwall Construction	Cranes	1	7.00	231	0.29
Floodwall Construction	Forklifts	0	8.00	89	0.20
Floodwall Construction	Generator Sets	0	8.00	84	0.74
Grading	Excavators	2	8.00	158	0.38
Levee Construction	Cranes	0	7.00	231	0.29
Levee Construction	Forklifts	0	8.00	89	0.20
Levee Construction	Generator Sets	0	8.00	84	0.74
Paving	Pavers	2	8.00	130	0.42
Paving	Rollers	2	8.00	80	0.38
Floodwall Construction	Tractors/Loaders/Backhoes	0	7.00	97	0.37
Grading	Rubber Tired Dozers	0	8.00	247	0.40

Levee Construction	Tractors/Loaders/Backhoes	2	7.00	97	0.37
Grading	Graders	1	8.00	187	0.41
Grading	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Paving	Paving Equipment	2	8.00	132	0.36
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation	Rubber Tired Dozers	0	8.00	247	0.40
Levee Construction	Welders	0	8.00	46	0.45
Floodwall Construction	Welders	0	8.00	46	0.45
Levee Construction	Excavators	1	8.00	158	0.38
Levee Construction	Graders	1	8.00	187	0.41
Levee Construction	Off-Highway Trucks	1	8.00	189	0.38
Levee Construction	Rollers	2	8.00	80	0.38
Grading	Off-Highway Trucks	1	8.00	189	0.38
Grading	Sweepers/Scrubbers	1	1.00	64	0.46
Site Preparation	Excavators	1	8.00	158	0.38
Site Preparation	Graders	1	1.00	187	0.41
Site Preparation	Off-Highway Trucks	1	8.00	189	0.38
Site Preparation	Skid Steer Loaders	1	8.00	65	0.37
Site Preparation	Sweepers/Scrubbers	1	8.00	64	0.46
Floodwall Construction	Bore/Drill Rigs	1	8.00	221	0.50
Floodwall Construction	Off-Highway Trucks	1	8.00	402	0.38
Floodwall Construction	Skid Steer Loaders	1	8.00	65	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Floodwall Construction	4	4.00	14.00	26.00	10.80	7.30	20.00	EMFAC_Mix	EMFAC_Mix	HHDT
Levee Construction	7	8.00	4.00	2,050.00	10.80	7.30	20.00	EMFAC_Mix	EMFAC_Mix	HHDT
Grading	9	23.00	24.00	0.00	10.80	7.30	20.00	EMFAC_Mix	EMFAC_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.80	7.30	20.00	EMFAC_Mix	EMFAC_Mix	HHDT
Site Preparation	6	15.00	12.00	0.00	10.80	7.30	20.00	EMFAC_Mix	EMFAC_Mix	HHDT

3.1 Mitigation Measures Construction

Replace Ground Cover

Water Exposed Area

Clean Paved Roads

3.2 Site Preparation - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2700e-003	0.0743	0.0561	1.0000e-004		4.1300e-003	4.1300e-003		3.8000e-003	3.8000e-003	0.0000	9.0601	9.0601	2.8200e-003	0.0000	9.1307
Total	**7.2700e-003**	**0.0743**	**0.0561**	**1.0000e-004**	**0.0000**	**4.1300e-003**	**4.1300e-003**	**0.0000**	**3.8000e-003**	**3.8000e-003**	**0.0000**	**9.0601**	**9.0601**	**2.8200e-003**	**0.0000**	**9.1307**

3.2 Site Preparation - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.8000e-004	1.4700e-003	0.0000	3.3000e-004	1.0000e-005	3.3000e-004	9.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.3861	0.3861	2.0000e-005	0.0000	0.3865
Worker	3.1000e-004	9.5000e-004	2.4800e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.6976	0.6976	3.0000e-005	0.0000	0.6983
Total	**5.0000e-004**	**1.5300e-003**	**3.9500e-003**	**1.0000e-005**	**9.3000e-004**	**2.0000e-005**	**9.4000e-004**	**2.5000e-004**	**2.0000e-005**	**2.6000e-004**	**0.0000**	**1.0837**	**1.0837**	**5.0000e-005**	**0.0000**	**1.0848**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	7.2700e-003	0.0743	0.0561	1.0000e-004		4.1300e-003	4.1300e-003		3.8000e-003	3.8000e-003	0.0000	9.0601	9.0601	2.8200e-003	0.0000	9.1306
Total	**7.2700e-003**	**0.0743**	**0.0561**	**1.0000e-004**	**0.0000**	**4.1300e-003**	**4.1300e-003**	**0.0000**	**3.8000e-003**	**3.8000e-003**	**0.0000**	**9.0601**	**9.0601**	**2.8200e-003**	**0.0000**	**9.1306**

3.2 Site Preparation - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.9000e-004	5.8000e-004	1.4700e-003	0.0000	3.3000e-004	1.0000e-005	3.3000e-004	9.0000e-005	1.0000e-005	9.0000e-005	0.0000	0.3861	0.3861	2.0000e-005	0.0000	0.3865
Worker	3.1000e-004	9.5000e-004	2.4800e-003	1.0000e-005	6.0000e-004	1.0000e-005	6.1000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	0.6976	0.6976	3.0000e-005	0.0000	0.6983
Total	**5.0000e-004**	**1.5300e-003**	**3.9500e-003**	**1.0000e-005**	**9.3000e-004**	**2.0000e-005**	**9.4000e-004**	**2.5000e-004**	**2.0000e-005**	**2.6000e-004**	**0.0000**	**1.0837**	**1.0837**	**5.0000e-005**	**0.0000**	**1.0848**

3.3 Grading - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.1200e-003	0.0000	2.1200e-003	2.3000e-004	0.0000	2.3000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0263	0.2854	0.2002	3.6000e-004		0.0148	0.0148		0.0137	0.0137	0.0000	32.7481	32.7481	0.0102	0.0000	33.0030
Total	**0.0263**	**0.2854**	**0.2002**	**3.6000e-004**	**2.1200e-003**	**0.0148**	**0.0170**	**2.3000e-004**	**0.0137**	**0.0139**	**0.0000**	**32.7481**	**32.7481**	**0.0102**	**0.0000**	**33.0030**

3.3 Grading - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.6000e-004	2.3400e-003	5.8800e-003	2.0000e-005	1.3100e-003	2.0000e-005	1.3300e-003	3.5000e-004	2.0000e-005	3.7000e-004	0.0000	1.5443	1.5443	7.0000e-005	0.0000	1.5459
Worker	9.5000e-004	2.9200e-003	7.6200e-003	2.0000e-005	1.8500e-003	3.0000e-005	1.8800e-003	5.0000e-004	3.0000e-005	5.3000e-004	0.0000	2.1394	2.1394	8.0000e-005	0.0000	2.1415
Total	**1.7100e-003**	**5.2600e-003**	**0.0135**	**4.0000e-005**	**3.1600e-003**	**5.0000e-005**	**3.2100e-003**	**8.5000e-004**	**5.0000e-005**	**9.0000e-004**	**0.0000**	**3.6836**	**3.6836**	**1.5000e-004**	**0.0000**	**3.6874**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					8.3000e-004	0.0000	8.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0263	0.2854	0.2002	3.6000e-004		0.0148	0.0148		0.0137	0.0137	0.0000	32.7481	32.7481	0.0102	0.0000	33.0029
Total	**0.0263**	**0.2854**	**0.2002**	**3.6000e-004**	**8.3000e-004**	**0.0148**	**0.0157**	**9.0000e-005**	**0.0137**	**0.0137**	**0.0000**	**32.7481**	**32.7481**	**0.0102**	**0.0000**	**33.0029**

3.3 Grading - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.6000e-004	2.3400e-003	5.8800e-003	2.0000e-005	1.3100e-003	2.0000e-005	1.3300e-003	3.5000e-004	2.0000e-005	3.7000e-004	0.0000	1.5443	1.5443	7.0000e-005	0.0000	1.5459
Worker	9.5000e-004	2.9200e-003	7.6200e-003	2.0000e-005	1.8500e-003	3.0000e-005	1.8800e-003	5.0000e-004	3.0000e-005	5.3000e-004	0.0000	2.1394	2.1394	8.0000e-005	0.0000	2.1415
Total	**1.7100e-003**	**5.2600e-003**	**0.0135**	**4.0000e-005**	**3.1600e-003**	**5.0000e-005**	**3.2100e-003**	**8.5000e-004**	**5.0000e-005**	**9.0000e-004**	**0.0000**	**3.6836**	**3.6836**	**1.5000e-004**	**0.0000**	**3.6874**

3.4 Levee Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2566	2.7932	1.7447	3.3100e-003		0.1421	0.1421		0.1307	0.1307	0.0000	302.0146	302.0146	0.0940	0.0000	304.3651
Total	**0.2566**	**2.7932**	**1.7447**	**3.3100e-003**		**0.1421**	**0.1421**		**0.1307**	**0.1307**	**0.0000**	**302.0146**	**302.0146**	**0.0940**	**0.0000**	**304.3651**

3.4 Levee Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.8300e-003	0.3380	0.0644	8.3000e-004	0.0173	1.3400e-003	0.0187	4.7600e-003	1.2800e-003	6.0400e-003	0.0000	80.2101	80.2101	4.2500e-003	0.0000	80.3164
Vendor	1.4600e-003	4.5000e-003	0.0113	3.0000e-005	2.5200e-003	4.0000e-005	2.5600e-003	6.8000e-004	4.0000e-005	7.2000e-004	0.0000	2.9727	2.9727	1.3000e-004	0.0000	2.9758
Worker	3.8300e-003	0.0117	0.0306	9.0000e-005	7.4400e-003	1.3000e-004	7.5700e-003	2.0000e-003	1.2000e-004	2.1200e-003	0.0000	8.5947	8.5947	3.4000e-004	0.0000	8.6031
Total	**0.0151**	**0.3543**	**0.1064**	**9.5000e-004**	**0.0273**	**1.5100e-003**	**0.0288**	**7.4400e-003**	**1.4400e-003**	**8.8800e-003**	**0.0000**	**91.7775**	**91.7775**	**4.7200e-003**	**0.0000**	**91.8953**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.2566	2.7932	1.7447	3.3100e-003		0.1421	0.1421		0.1307	0.1307	0.0000	302.0142	302.0142	0.0940	0.0000	304.3647
Total	**0.2566**	**2.7932**	**1.7447**	**3.3100e-003**		**0.1421**	**0.1421**		**0.1307**	**0.1307**	**0.0000**	**302.0142**	**302.0142**	**0.0940**	**0.0000**	**304.3647**

3.4 Levee Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.8300e-003	0.3380	0.0644	8.3000e-004	0.0173	1.3400e-003	0.0187	4.7600e-003	1.2800e-003	6.0400e-003	0.0000	80.2101	80.2101	4.2500e-003	0.0000	80.3164
Vendor	1.4600e-003	4.5000e-003	0.0113	3.0000e-005	2.5200e-003	4.0000e-005	2.5600e-003	6.8000e-004	4.0000e-005	7.2000e-004	0.0000	2.9727	2.9727	1.3000e-004	0.0000	2.9758
Worker	3.8300e-003	0.0117	0.0306	9.0000e-005	7.4400e-003	1.3000e-004	7.5700e-003	2.0000e-003	1.2000e-004	2.1200e-003	0.0000	8.5947	8.5947	3.4000e-004	0.0000	8.6031
Total	**0.0151**	**0.3543**	**0.1064**	**9.5000e-004**	**0.0273**	**1.5100e-003**	**0.0288**	**7.4400e-003**	**1.4400e-003**	**8.8800e-003**	**0.0000**	**91.7775**	**91.7775**	**4.7200e-003**	**0.0000**	**91.8953**

3.5 Floodwall Construction - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1249	1.4777	0.7419	2.2300e-003		0.0555	0.0555		0.0511	0.0511	0.0000	203.4277	203.4277	0.0633	0.0000	205.0109
Total	**0.1249**	**1.4777**	**0.7419**	**2.2300e-003**		**0.0555**	**0.0555**		**0.0511**	**0.0511**	**0.0000**	**203.4277**	**203.4277**	**0.0633**	**0.0000**	**205.0109**

3.5 Floodwall Construction - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	4.2900e-003	8.2000e-004	1.0000e-005	2.2000e-004	2.0000e-005	2.4000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	1.0173	1.0173	5.0000e-005	0.0000	1.0187
Vendor	3.3100e-003	0.0102	0.0257	7.0000e-005	5.7200e-003	1.0000e-004	5.8200e-003	1.5400e-003	9.0000e-005	1.6300e-003	0.0000	6.7562	6.7562	2.8000e-004	0.0000	6.7633
Worker	1.2400e-003	3.8100e-003	9.9300e-003	3.0000e-005	2.4200e-003	4.0000e-005	2.4600e-003	6.5000e-004	4.0000e-005	6.9000e-004	0.0000	2.7905	2.7905	1.1000e-004	0.0000	2.7932
Total	**4.6700e-003**	**0.0183**	**0.0365**	**1.1000e-004**	**8.3600e-003**	**1.6000e-004**	**8.5200e-003**	**2.2500e-003**	**1.5000e-004**	**2.4000e-003**	**0.0000**	**10.5639**	**10.5639**	**4.4000e-004**	**0.0000**	**10.5751**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1249	1.4777	0.7419	2.2300e-003		0.0555	0.0555		0.0511	0.0511	0.0000	203.4275	203.4275	0.0633	0.0000	205.0107
Total	**0.1249**	**1.4777**	**0.7419**	**2.2300e-003**		**0.0555**	**0.0555**		**0.0511**	**0.0511**	**0.0000**	**203.4275**	**203.4275**	**0.0633**	**0.0000**	**205.0107**

3.5 Floodwall Construction - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.2000e-004	4.2900e-003	8.2000e-004	1.0000e-005	2.2000e-004	2.0000e-005	2.4000e-004	6.0000e-005	2.0000e-005	8.0000e-005	0.0000	1.0173	1.0173	5.0000e-005	0.0000	1.0187
Vendor	3.3100e-003	0.0102	0.0257	7.0000e-005	5.7200e-003	1.0000e-004	5.8200e-003	1.5400e-003	9.0000e-005	1.6300e-003	0.0000	6.7562	6.7562	2.8000e-004	0.0000	6.7633
Worker	1.2400e-003	3.8100e-003	9.9300e-003	3.0000e-005	2.4200e-003	4.0000e-005	2.4600e-003	6.5000e-004	4.0000e-005	6.9000e-004	0.0000	2.7905	2.7905	1.1000e-004	0.0000	2.7932
Total	**4.6700e-003**	**0.0183**	**0.0365**	**1.1000e-004**	**8.3600e-003**	**1.6000e-004**	**8.5200e-003**	**2.2500e-003**	**1.5000e-004**	**2.4000e-003**	**0.0000**	**10.5639**	**10.5639**	**4.4000e-004**	**0.0000**	**10.5751**

3.6 Paving - 2018

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0164	0.1752	0.1480	2.3000e-004		9.5600e-003	9.5600e-003		8.8000e-003	8.8000e-003	0.0000	20.8116	20.8116	6.4800e-003	0.0000	20.9736
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0164**	**0.1752**	**0.1480**	**2.3000e-004**		**9.5600e-003**	**9.5600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**20.8116**	**20.8116**	**6.4800e-003**	**0.0000**	**20.9736**

3.6 Paving - 2018

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	1.9100e-003	4.9700e-003	2.0000e-005	1.2100e-003	2.0000e-005	1.2300e-003	3.2000e-004	2.0000e-005	3.4000e-004	0.0000	1.3952	1.3952	5.0000e-005	0.0000	1.3966
Total	**6.2000e-004**	**1.9100e-003**	**4.9700e-003**	**2.0000e-005**	**1.2100e-003**	**2.0000e-005**	**1.2300e-003**	**3.2000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.3952**	**1.3952**	**5.0000e-005**	**0.0000**	**1.3966**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0164	0.1752	0.1480	2.3000e-004		9.5600e-003	9.5600e-003		8.8000e-003	8.8000e-003	0.0000	20.8116	20.8116	6.4800e-003	0.0000	20.9736
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0164**	**0.1752**	**0.1480**	**2.3000e-004**		**9.5600e-003**	**9.5600e-003**		**8.8000e-003**	**8.8000e-003**	**0.0000**	**20.8116**	**20.8116**	**6.4800e-003**	**0.0000**	**20.9736**

3.6 Paving - 2018

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.2000e-004	1.9100e-003	4.9700e-003	2.0000e-005	1.2100e-003	2.0000e-005	1.2300e-003	3.2000e-004	2.0000e-005	3.4000e-004	0.0000	1.3952	1.3952	5.0000e-005	0.0000	1.3966
Total	**6.2000e-004**	**1.9100e-003**	**4.9700e-003**	**2.0000e-005**	**1.2100e-003**	**2.0000e-005**	**1.2300e-003**	**3.2000e-004**	**2.0000e-005**	**3.4000e-004**	**0.0000**	**1.3952**	**1.3952**	**5.0000e-005**	**0.0000**	**1.3966**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
User Defined Industrial	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
User Defined Industrial	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0263	4.7000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.0983	0.0983	2.6000e-004	0.0000	0.1049
Unmitigated	0.0263	4.7000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.0983	0.0983	2.6000e-004	0.0000	0.1049

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0215					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.7800e-003	4.7000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.0983	0.0983	2.6000e-004	0.0000	0.1049
Total	**0.0263**	**4.7000e-004**	**0.0509**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0983**	**0.0983**	**2.6000e-004**	**0.0000**	**0.1049**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0215					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.7800e-003	4.7000e-004	0.0509	0.0000		1.8000e-004	1.8000e-004		1.8000e-004	1.8000e-004	0.0000	0.0983	0.0983	2.6000e-004	0.0000	0.1049
Total	**0.0263**	**4.7000e-004**	**0.0509**	**0.0000**		**1.8000e-004**	**1.8000e-004**		**1.8000e-004**	**1.8000e-004**	**0.0000**	**0.0983**	**0.0983**	**2.6000e-004**	**0.0000**	**0.1049**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
User Defined Industrial	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.0000	0.0000	0.0000	0.0000
Unmitigated	0.0000	0.0000	0.0000	0.0000

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
User Defined Industrial	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Appendix B

Arborist Reports

Arborist Report

Lake Cunningham Flood Detention Facility Project
San Jose, CA

Prepared for:
Santa Clara Valley Water District
5750 Almaden Expressway
San Jose CA, 95116

Prepared by:
HortScience, Inc.
325 Ray Street
Pleasanton, CA 94566

September 7, 2016

HORT SCIENCE

Arborist Report
Lake Cunningham Flood Detention Facility Project
San Jose CA

Table of Contents

	Page
Introduction and Overview	1
Tree Assessment Methods	1
Description of Trees	2
Suitability for Preservation	4
Evaluation of Impacts and Recommendations	5
Tree Preservation Guidelines	8

List of Tables

Table 1. Condition ratings and frequency of occurrence of trees	2
Table 2. Tree suitability for preservation	5
Table 3. Trees recommended for removal	7

Exhibits

Tree Assessment

Arborist Report
Lake Cunningham Flood Detention Facility Project
San Jose CA

Introduction and Overview

The Santa Clara Valley Water District is planning to construct the Cunningham Flood Detention Facility Certification Project in order to raise the existing creek levees along the periphery of the park to provide the necessary freeboard above the water surface elevation for a 100-year flood event. The project includes raising the existing levee along Lower Silver Creek and constructing a floodwall along Flint Creek parallel to Cunningham Avenue. HortScience, Inc. was asked to prepare an **Arborist Report** for the project.

This report provides the following information:

1. An assessment of trees within and immediately adjacent to the proposed project area.
2. An evaluation of the impacts on trees of constructing the proposed project based on the plans provided by the Santa Clara Valley Water District.
3. Guidelines for tree preservation during the design, construction, and maintenance phases of development.

Tree Assessment Methods

Trees were assessed on September 29, October 1, and October 2, 2015. The assessment included trees defined by the City of San Jose as any plant over 6' tall. Plants that were smaller than 1" in diameter were not included in the assessment. The survey procedure consisted of the following steps:

1. Identifying the tree species;
2. Tagging each tree with an identifying number;
3. Measuring the trunk diameter at a point 24" above grade;
4. Evaluating the health and structural condition using a scale of 1 to 5:

   5 - A healthy, vigorous tree, reasonably free of signs and symptoms of disease, with good structure and form typical of the species.

   4 - Tree with slight decline in vigor, small amount of twig dieback, minor structural defects that could be corrected.

   3 - Tree with moderate vigor, moderate twig and small branch dieback, thinning of crown, poor leaf color, moderate structural defects that might be mitigated with regular care.

   2 - Tree in decline, epicormic growth, extensive dieback of medium to large branches, significant structural defects that cannot be abated.

   1 - Tree in severe decline, dieback of scaffold branches and/or trunk; most of foliage from epicormics; extensive structural defects that cannot be abated.

5. Rating the suitability for preservation as "high", "moderate" or "low". Suitability for preservation considers the health, age and structural condition of the tree, and its potential to remain an asset to the site for years to come.

   High: Trees with good health and structural stability that have the potential for longevity at the site.

   Moderate: Trees with somewhat declining health and/or structural defects than can be abated with treatment. The tree will require more intense management and monitoring, and may have shorter life span than those in 'high' category.

   Low: Trees in poor health or with significant structural defects that cannot be mitigated. Tree is expected to continue to decline, regardless of treatment. The species or individual may have characteristics that are undesirable for landscapes, and generally are unsuited for use areas.

Description of Trees

One hundred seventy-six (176) trees were evaluated for this portion of the project, representing 13 species. Trees were numbered 145-278 and 383-424. Trees were growing in a natural setting along the north bank of Flint Creek and on the levee along Lower Silver Creek. While some trees had been planted at the site, specifically mature California pepper and Aleppo pines, many others appeared to have self-seeded. There were numerous small seedlings among young to semi-mature trees growing closer to the creek.

More than one third (37%) of the trees evaluated were in poor condition, 46% were in fair condition, and 17% were in good condition (Table 1). The largest species (by trunk diameter) included Aleppo pine, California pepper, and silver dollar gum. Two species are native to the region: red willow, and Western sycamore. The remaining 11 species are not considered native to California. Descriptions of each tree are found in the ***Tree Assessment*** form (see Exhibits).

Table 1: Condition ratings and frequency of occurrence of trees.
Lake Cunningham, San Jose

Common Name	Scientific Name	Condition			Total
		Poor (1-2)	Fair (3)	Good (4-5)	
Silver maple	*Acer saccharinum*	2	4	3	**9**
Carob	*Ceratonia siliqua*	-	2	-	**2**
Silver dollar gum	*Eucalyptus polyanthemos*	10	5	-	**15**
Evergreen ash	*Fraxinus uhdei*	-	3	1	**4**
Australian willow	*Geijera parviflora*	3	15	1	**19**
Olive	*Olea europaea*	-	1	-	**1**
Aleppo pine	*Pinus halepensis*	21	23	10	**54**
Chinese pistache	*Pistacia chinensis*	-	-	2	**2**
Western sycamore	*Platanus racemosa*	-	4	3	**7**
Purpleleaf plum	*Prunus cerasifera*	7	3	-	**10**
Red willow	*Salix laevigata*	2	2	-	**4**
California pepper	*Schinus molle*	19	19	10	**48**
Brazilian pepper	*Schinus terebinthifolius*	1	-	-	**1**
Total		**65**	**81**	**30**	**176**
		37%	**46%**	**17%**	**100%**

The most frequently occurring species was California pepper, with 48 trees or 36% of the population, and located along Flint Creek. Trees ranged from young to mature, with trunk diameters ranging from 4 to 38 inches and a mean diameter of 18 inches for single-trunk trees. Trees were mostly in poor and fair conditions (19 trees in each category) and were characterized as having poor structure, such as codominant or multiple trunks, and poor form, such as stunted form or significant leans. Ten (10) trees were in good condition with spreading form and dense crowns (Photo 1). Trees in

Photo 1: California pepper #259 was in good condition with a dense, spreading crown.

good condition were semi-mature to mature, with trunk diameters from 18 to 38 inches.

The second most common species evaluated was Aleppo pine, with 54 trees (32%). Most trees along Flint Creek were in fair and poor condition, while most along Lower Silver Creek were in good condition. Forty-seven (47) single trunk trees had trunk diameters that ranged from three to 36 inches, with an average diameter of 17 inches. Most trees were in poor (21 trees) or fair (23 trees) condition (Photo 2). Many trees in poor condition had significant leans, thin crowns, and poor structure. Trees in fair condition had corrected leans, fair structure, and slightly thin crowns. Ten (10) trees were in good condition. Two 28-inch trees (#156 and 229) had good form and structure and only minor thinning and twig dieback. Eight young trees along Lower Silver Creek had dense crowns.

Photo 2: Aleppo pine #261 was in fair condition with corrected lean, codominant trunks, and dense crown.

Fifteen (15) silver dollar gums were evaluated (9%) along Flint Creek. Trees were young to mature, with trunk diameters from four to 33 inches, and an average 18-inch trunk diameter. Five trees were in fair condition, with fair form and dieback. The remaining 10 trees were in poor condition, with poor structure and very thin crowns.

Purpleleaf plums made up 6% of the population with 10 trees. Trees were young, with trunk diameters from four to seven inches. Seven trees were in poor condition, with poor form and structure, and three trees were in fair condition.

Nine silver maples (5%), located along Lower Silver Creek, were in good to poor condition. Trees in poor condition (two trees) were severely drought stressed. Trees in good condition (three trees) had good form, dense crowns, and fair structure.

Seven Western sycamores were evaluated (4%) and were in fair (four trees) and good (three trees) condition. Trunk diameter ranged from seven to 18 inches, with an average diameter of 11 inches. All trees had good vigor. Trees in fair condition had slight leans.

The remaining species were represented by four or fewer trees an included the following.

- Four red willows,
- Two carobs,
- Two Chinese pistache,
- One each of evergreen ash, Brazilian pepper, and olive.

The City of San Jose designates trees 18” and larger in diameter as “Ordinance Sized Trees.” By this definition, 78 trees were *Ordinance Sized*. Designations for individual trees are provided in the *Tree Assessment* (see *Exhibits*).

Suitability for Preservation

Before evaluating the impacts that will occur during development, it is important to consider the quality of the tree resource itself, and the potential for individual trees to function well over an extended length of time. Trees that are preserved on development sites must be carefully selected to make sure that they may survive development impacts, adapt to a new environment, and perform well in the landscape.

Our goal is to identify trees that have the potential for long-term health, structural stability and longevity. For trees growing in open areas, away from areas where people and property are present, structural defects and/or poor health presents a low risk of damage or injury if they fail. However, we must be concerned about safety in use areas. Therefore, where development encroaches into existing plantings, we must consider their structural stability as well as their potential to grow and thrive in a new environment. Where development will not occur, the normal life cycles of decline, structural failure and death should be allowed to continue.

Each tree was rated for suitability for preservation based upon its age, health, structural condition and ability to safely coexist within a development environment (Table 2, following page).

Evaluation of suitability for preservation considers several factors:

- **Tree health**
  Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

- **Structural integrity**
  Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely. For example, Aleppo pine #222, with a significant lean northeast, has a high likelihood of failure.

- **Species response**
  There is a wide variation in the response of individual species to construction impacts and changes in the environment. In our experience, for example, silver dollar gum and Western sycamore are moderately sensitive to root loss, while Chinese pistache is more tolerant of site disturbance.

- **Tree age and longevity**
  Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change.

- **Invasiveness**
  Species that spread across a site and displace desired vegetation are not always appropriate for retention. This is particularly true when indigenous species are displaced. The California Invasive Plant Inventory Database (http://www.cal-ipc.org/paf/) lists species identified as being invasive. San Jose is part of the Central West Floristic Province.

  Brazilian pepper, California pepper, purpleleaf plum, and olive are considered *limited* invasive. Limited is defined as “species [that] are invasive but their ecological impacts are minor on a statewide level or there was not enough information to justify a higher score. Their reproductive biology and other attributes result in low to moderate rates of invasiveness. Ecological amplitude and distribution are generally limited, but these species may be locally persistent and problematic.”

We consider trees with high suitability for preservation to be the best candidates for preservation. We do not recommend retention of trees with low suitability for preservation in areas where people or property will be present. Retention of trees with moderate suitability for preservation depends upon the intensity of proposed site changes.

Table 2: Tree suitability for preservation
Lake Cunningham, San Jose

High	Trees with good health and structural stability that have the potential for longevity at the site. Twenty-two (22) trees were rated as having high suitability for preservation.
Moderate	Trees with fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the "high" category. Seventy (70) trees were of moderate suitability.
Low	Trees in poor health or with significant defects in structure that cannot be abated with treatment. Trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings, or be unsuited for use areas. Eighty-four (84) trees were of low suitability for preservation.

Evaluation of Impacts and Recommendations

Appropriate tree retention develops a practical match between the location and intensity of construction activities and the quality and health of trees. The ***Tree Assessment*** was the reference point for tree condition and quality. I referred to the "Cunningham Flood Detention Facility Certification Project" sheets C-01 to C-04 (Levee) and C-06 to C-07 dated 2/22/16, and C-13 to C-17 (Floodwall) dated 4/19/16, to estimate impacts to trees. Detail and floodwall section drawings were not provided.

Surveyed tree locations were included on plans. Tree tag numbers were not included on plans. Instead, trees on the plans were labeled with Survey Data Point numbers. Tree numbers referenced in this section must be verified in the field prior to demolition.

Plans show the existing levee along Lower Silver Creek to be raised. Grading will impact four trees (#389-392) along Cunningham Ave. requiring their removal. Any trees located within access areas (not shown on plans) will need to be protected from impacts to roots and crowns.

Plans show the floodwall and the limits of construction impacts along Flint Creek and a short north portion of Ruby Creek (Figure 1). The construction impact area for the proposed pile footings includes a three-foot offset from the wall centerline, or six-foot overall width. The floodwall begins east of the Cunningham Bridge, runs

Figure 1: Tree impacts will be most significant at the location of the new floodwall (area circled in red).

east toward the intersection of Cunningham Ave. and S. White Rd., and then runs southwest approximately 70 feet. A new pedestrian pathway is proposed, with access from White Rd.

Impacts were estimated for trees within and adjacent to the project limits based on information available to date. The most significant impacts to trees will occur during excavation for and construction of the poured-in-place concrete retaining wall and for the new portion of the walkway. Impacts to trees would occur in the following ways.

- Trees within the six-foot construction impact area, within the pedestrian access road, and within levee grading will require removal.
- Trees outside of but within 10 feet of the construction impact area will suffer root loss to varying degrees.
- Many trees will require pruning for construction clearance. For example, Aleppo pine #233 has a lateral limb that extends south over the proposed retaining wall (Photo 3). The limb will likely need to be removed for construction clearance
- In some cases, tree trunks extend into the construction area, requiring whole tree removal (Photo 4).
- Soil compaction from both heavy machinery and spoil storage may damage roots both directly through mechanical injury and indirectly by compacting soil and altering soil structure, drainage, and biology. Compaction can be reduced by laying a thick layer of coarse bark mulch over soil in access areas and avoiding storage of spoil and equipment beneath trees.

Photo 3: (Looking west) the south-facing limb (arrow) on Aleppo pine #233 will need to be removed to provide construction clearance. Plans show the floodwall approximately 8 feet south of the trunk.

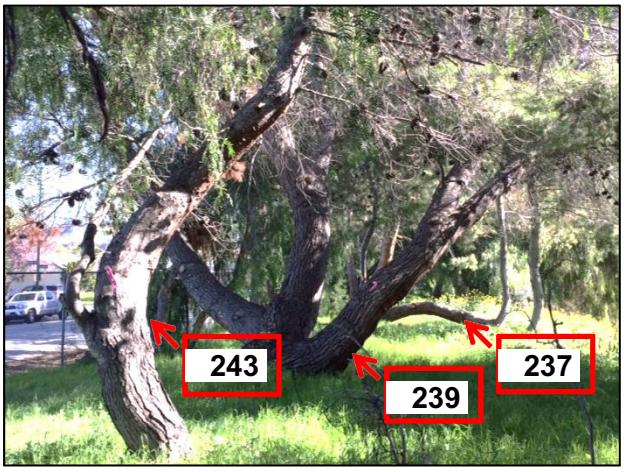

Photo 4: (Looking east) Plans show the impact area 4-6 feet south of trunks. Tree #237 failed at the base and extends into the construction area and must be removed. Tree #239 will lose a significant stem. Trees #239 and 243 are in poor condition, may not tolerate impacts, and may need to be removed once construction begins.

The extent and severity of root loss will depend on the size of the tree and the tree's proximity to the construction impact area. Young and/or small trees, with smaller and fewer woody roots, will tolerate impacts better than mature/large trees.

In order to minimize impacts to roots, the following has been recommended:

- Preserve significant roots (2 inches and greater) that extend into the limit of construction, to the extent possible.
- When working within tree driplines, excavate slowly and with care to avoid tearing roots. Soil should be removed in 4-6 inch lifts, and soil removal should occur parallel to root growth.
- Any roots that must be removed should be pruned clean and square at undamaged tissue with a sharp saw.
- Exposed roots should be covered with burlap and kept moist to prevent desiccation until roots can be re-covered with soil.

In general, trees that are in good condition will tolerate root loss better than trees in fair or poor condition. Trees in poor condition (with a condition rating of 2 or 1) located within 5 feet of the limit of construction will experience moderate to severe root loss and may not have the resources to recover from the impacts. However, because the floodwall will be located in a low use area, the client has chosen to preserve these trees, which provide screening, wildlife habitat, and other environmental benefits.

If site work reveals that root impacts will exceed a tree's tolerances for health or stability, we may make a determination in the field to remove the tree. For example, Aleppo pine #218 (survey data point #399) and Calif. pepper #224 (#393), with trunks located just outside the limit of construction, may be preserved if exploratory excavation reveals moderate to minor root impacts and pile locations can be adjusted to avoid destroying significant roots.

Trees #160 and 213 were nearly dead. Both trees are located near the floodwall and could damage the wall should either tree fail. They are recommended for removal.

Based on my evaluation of the plans for the floodwall using pile footings, 26 trees would require removal (Table 3). Eighteen (18) trees will be directly impacted by development and eight trees are in very poor condition with low suitability for preservation. Of these, 10 are considered *Ordinance-size Trees*. None were native species.

Table 3. Trees recommended for removal
Lake Cunningham, San Jose

Tree Tag No.	Survey Data Point	Species	Diam.	Cond.	Suit.	Ord. size tree?
145	33014	Purpleleaf plum	4	2	Low	No
146	33013	Silver dollar gum	4	2	Low	No
147	33012	Purpleleaf plum	5	2	Low	No
148	33010	Purpleleaf plum	6	2	Low	No
149	33011	Purpleleaf plum	8,5	3	Low	No
150	33009	Purpleleaf plum	7	2	Low	No
151	452	Purpleleaf plum	7	2	Low	No
152	451	Purpleleaf plum	5	2	Low	No
159	444	Silver dollar gum	30	2	Low	Yes
160	443	Silver dollar gum	17	1	Low	No
162	441	Chinese pistache	7	4	High	No
206	411	Silver dollar gum	33	2	Low	Yes
207	410	Silver dollar gum	20	2	Low	Yes
208	409	California pepper	14	3	Moderate	No
212	405	Aleppo pine	20,18	2	Low	Yes

213	404	Silver dollar gum	15	1	Low	No
230	387	Aleppo pine	18	2	Low	Yes
237	380	Aleppo pine	14,7	2	Low	Yes
261	352	Aleppo pine	17,14	3	Moderate	Yes
268	345	Aleppo pine	18	3	Moderate	Yes
270	343	Aleppo pine	26	2	Low	Yes
277	336	California pepper	38,19	4	High	Yes
389	42041	Silver maple	2	2	Low	No
390	42042	Australian willow	4	3	Moderate	No
391	42043	Australian willow	3	2	Low	No
392	42044	Australian willow	3	3	Moderate	No

One hundred fifty-seven (157) trees will be preserved. Preservation depends on establishing a tree protection zone and restricting impacts within that area. Tree protection zones should be fenced with chain link fencing. Trees located within 5 feet of construction impacts limit should receive additional protection from incidental contact with the use of hay bales.

Tree Preservation Guidelines

The goal of tree preservation is not merely tree survival during development but maintenance of tree health and beauty for many years. Trees retained on sites that are either subject to extensive injury during construction or are inadequately maintained become a liability rather than an asset. The response of individual trees depends on the amount of excavation and grading, care with which demolition is undertaken, and construction methods. Coordinating any construction activity inside the **TREE PROTECTION ZONE** can minimize these impacts.

The following recommendations will help reduce impacts to trees during construction activities and maintain and improve their health and vitality through the clearing, grading and construction phases.

Design recommendations

1. For trees identified for preservation, designate a **TREE PROTECTION ZONE** in which construction and grading are limited. For design purposes, the **TREE PROTECTION ZONE** should be either tree driplines or the edge of the proposed construction impact limits, whichever is larger.
2. Consider the vertical clearance requirements near trees during design. Avoid designs that would require pruning more than 20% of a tree's canopy.
3. All plans affecting trees shall be reviewed by the Consulting Arborist with regard to tree impacts. These include, but are not limited to demolition, grading, drainage, utility, and landscape and irrigation plans.
4. **Tree Preservation Guidelines** prepared by the Consulting Arborist, which include specifications for tree protection during demolition and construction, should be included on all plans

Pre-construction treatments and recommendations

1. The demolition and construction superintendents shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection.
2. Fence all trees to be retained in order to completely enclose the **TREE PROTECTION ZONE** prior to demolition, grubbing, or grading. Fences shall be 6 ft. chain link or equivalent. Fences are to remain in place until all grading and construction is completed.

3. Trees located within 5 feet of construction impact area (see ***Tree Protection Plan***) shall be protected from trunk damage by stacking hay bales around tree trunks (Photo 5).
4. Apply a 6-12" layer of wood chip mulch along access routes to minimize soil compaction, root damage, and erosion caused by heavy machinery.
5. Prune trees to be preserved to clean the crown of dead branches 2" and larger in diameter and to raise canopies as needed for construction activities. Branches extending into the work area that can remain following demolition shall be tied back and protected from damage.
6. Trees to be removed shall be felled so as to fall away from **TREE PROTECTION ZONE** and avoid pulling and breaking of roots of trees to remain. If roots are entwined, the Consulting Arborist may require first severing the major woody root mass before extracting the trees, or grinding the stump below ground.

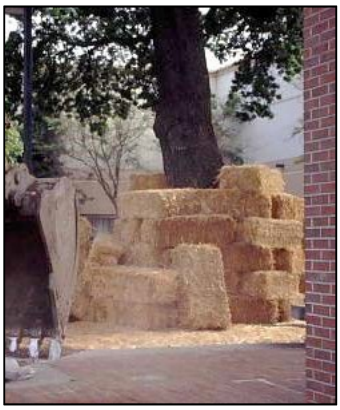

Photo 5: Stacked hay bales protect trunks from damage from incidental contact.

7. Tree(s) to be removed that have branches extending into the canopy of tree(s) or located within the tree protection zone of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker and not by the demolition contractor. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade.
8. All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300). The Consulting Arborist will provide pruning specifications prior to site demolition.
9. All down brush and trees shall be removed from the **TREE PROTECTION ZONE** either by hand, or with equipment sitting outside the **TREE PROTECTION ZONE**. Extraction shall occur by lifting the material out, not by dragging across the ground. Brush shall be chipped and spread beneath the trees within the **TREE PROTECTION ZONE.**
10. Apply and maintain a 4-6" layer of wood chip mulch within the **TREE PROTECTION ZONE**. Keep the mulch 2' from the base of tree trunks.
11. All tree work shall comply with the Migratory Bird Treaty Act as well as California Fish and Wildlife code 3503-3513 to not disturb nesting birds. To the extent feasible, tree pruning and removal should be scheduled outside of the breeding season. Breeding bird surveys should be conducted prior to tree work. Qualified biologists should be involved in establishing work buffers for active nests.

Recommendations for tree protection during construction

1. Any construction activities within the **TREE PROTECTION ZONE** should be monitored by the Consulting Arborist.
2. All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved.
3. All grading within the dripline of trees shall be done using the smallest equipment possible. The equipment shall <u>operate perpendicular to the tree</u> and <u>operate from outside</u>

the **TREE PROTECTION ZONE**. Any modifications must be approved and monitored by the Consulting Arborist.

4. Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Consulting Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2" in diameter should be avoided.
5. If roots 2" and greater in diameter are encountered during site work and must be cut to complete the construction, the Consulting Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment.
6. Evaluate any injury to trees that should occur during construction. Notify the Consulting Arborist so that appropriate treatments can be applied.
7. Spoil from trench, footing, or other excavation shall not be placed within the **TREE PROTECTION ZONE**, neither temporarily nor permanently.
8. Tree protection devices are to remain until all site work has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Consulting Arborist.
9. Construction trailers, traffic and storage areas must remain outside **TREE PROTECTION ZONE**/fenced areas at all times.
10. If injury should occur to any tree during construction, it should be evaluated as soon as possible by the Consulting Arborist so that appropriate treatments can be applied.
11. Any additional tree pruning needed for clearance during construction must be performed by a Certified Arborist and not by construction personnel.

Maintenance of impacted trees
Any trees preserved at the site will experience a physical environment different from that pre-development. As a result, tree health and structural stability should be monitored. Occasional pruning, fertilization, mulch, pest management, replanting and irrigation may be required. In addition, provisions for monitoring both tree health and structural stability following construction must be made a priority. As trees age, the likelihood of branches or entire trees failing will increase. Therefore, annual inspection for hazard potential is recommended.

If you have any questions regarding my observations or recommendations, please contact me.

HortScience, Inc.

Deanne Ecklund

Exhibits: ***Tree Assessment***

Tree Assessment

Lake Cunningham
Flint Creek and Lower Silver Creek
San Jose, CA
October 2015

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Tree Tag No.	Survey Data Point	Species	Trunk Diameter (in.)	Ord. Size Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
145	33014	Purpleleaf plum	4	No	2	Low	Codominant trunks at 4'; poor form and structure.
146	33013	Silver dollar gum	4	No	2	Low	Small thin crown.
147	33012	Purpleleaf plum	5	No	2	Low	Codominant trunks at 3'; fair form, poor structure.
148	33010	Purpleleaf plum	6	No	2	Low	Codominant trunks at 3'; poor form and structure; trunk wound.
149	33011	Purpleleaf plum	8,5	No	3	Low	Codominant trunks at base; fair form; twig dieback.
150	33009	Purpleleaf plum	7	No	2	Low	Base outside of dripline; poor form and structure.
151	452	Purpleleaf plum	7	No	2	Low	Codominant trunks at 8'; poor structure.
152	451	Purpleleaf plum	5	No	2	Low	Poor form and structure; twig dieback.
153	450	Purpleleaf plum	4	No	3	Low	Small crown; crowded.
154	449	Purpleleaf plum	4	No	2	Low	Codominant trunks at 3'; fair form, poor structure.
155	448	Purpleleaf plum	6	No	3	Low	Multiple attachments at 5'; fair form and structure.
156		Aleppo pine	28	Yes	4	Moderate	Good form and structure; slightly thin crown.
157		Aleppo pine	11	No	2	Low	Serve lean S.; base outside of dripline.
158		Aleppo pine	19	Yes	3	Low	Leans S.; base outside of dripline; dense crown.
159	444	Silver dollar gum	30	Yes	2	Low	Multiple attachments at 3'; thin crown; dieback; dead stem; trunk wounds.
160	443	Silver dollar gum	17	No	1	Low	Mostly dead.
161	442	Chinese pistache	5	No	4	High	Good small tree.
162	441	Chinese pistache	7	No	4	High	Good small tree.
163		Aleppo pine	20	Yes	3	Low	Corrected lean S.; base outside of dripline.
164	439	Silver dollar gum	6,6	No	3	Moderate	Codominant trunks at 2' and 4' with narrow attachments; small crown.
165	438	Silver dollar gum	15	No	3	Low	Multiple attachments at 15' with narrow attachments; fair form.
166	437	Western sycamore	8	No	3	Moderate	Fair form and structure; small crown.
167		Western sycamore	11	No	4	Moderate	Slightly asymmetrical form; good vigor.
168	435	Western sycamore	18	Yes	4	High	Codominant trunks high in crown; good vigor.
169	434	Aleppo pine	23	Yes	3	Moderate	Corrected lean W.; base outside of dripline.
170	433	Aleppo pine	23	Yes	3	Moderate	Slight lean E.; good form.
171		Evergreen ash	7	No	4	Moderate	Codominant trunks at 14'; good small tree.

Tree Assessment

Lake Cunningham
Flint Creek and Lower Silver Creek
San Jose, CA
October 2015

Tree Tag No.	Survey Data Point	Species	Trunk Diameter (in.)	Ord. Size Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
172		Silver dollar gum	14,11	Yes	3	Low	Codominant trunks at 2'; thin crown; dieback.
173		Aleppo pine	13	No	2	Low	Small, high crown; base outside of dripline.
174		Aleppo pine	22	Yes	3	Moderate	Corrected lean W.; slightly thin crown.
175		Aleppo pine	25	Yes	3	Moderate	Codominant trunks high in crown; fair form.
176		California pepper	9,9	Yes	2	Low	Codominant trunks at base; serve lean W. toward creek; base outside of dripline.
177		Aleppo pine	5,5,4	No	2	Low	Multiple attachments at base; leans W. toward creek; base outside of dripline.
178		Silver dollar gum	5	No	2	Low	Leans W. toward creek; base outside of dripline.
179		California pepper	7,5,5,4,4	Yes	2	Low	Severe lean W. toward creek; base outside of dripline.
180		California pepper	8	No	2	Low	Trunk bows W. toward creek; base outside of dripline.
181		Silver dollar gum	22	Yes	3	Low	Codominant trunks at 3'; fair form; thin crown; dieback.
182		Silver dollar gum	24	Yes	2	Low	Multiple attachments at 3' with narrow attachments; thin crown; dieback.
183		California pepper	4	No	2	Low	Trunk bows W. toward creek; base outside of dripline.
184		California pepper	5	No	2	Low	Trunk bows W. toward creek; base outside of dripline.
185		California pepper	6,5	No	2	Low	Trunk bows W. toward creek; base outside of dripline.
186		California pepper	9	No	2	Low	Trunk bows W. toward creek; base outside of dripline.
187		California pepper	4	No	2	Low	Trunk bows W. toward creek; base outside of dripline.
188		California pepper	5	No	2	Low	Trunk bows W. toward creek; small, thin crown.
189		Western sycamore	10	No	3	Moderate	Trunk bows N.; good vigor.
190		Western sycamore	11	No	4	High	Codominant trunks high in crown; good vigor.
191		Silver dollar gum	16,10,7	Yes	2	Low	Multiple attachments at 2'; thin crown; narrow form; dieback.
192		Carob	5,4	No	3	Moderate	Codominant trunks at 1'; dense crown.
193		Silver dollar gum	8	No	2	Low	Codominant trunks at 16'; trunk wound high in crown; small crown.
194		Olive	5,4,4,2,2	No	3	Moderate	Multiple attachments at 1'; fair form and structure.
195		Western sycamore	7	No	3	Moderate	Trunk bows N.; fair form and structure; good vigor.
196		Carob	5,4,2	No	3	Moderate	Multiple attachments at base; dense crown.
197		Silver dollar gum	28	Yes	3	Moderate	Codominant trunks at 15'; slightly thin crown; twig dieback.

Tree Assessment

Lake Cunningham
Flint Creek and Lower Silver Creek
San Jose, CA
October 2015

Tree Tag No.	Survey Data Point	Species	Trunk Diameter (in.)	Ord. Size Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
198		California pepper	13	No	3	Low	Codominant trunks at 3'; trunks bow W. over creek.
199		California pepper	7	No	2	Low	Trunk bows W. over creek; base outside of dripline.
200		Brazilian pepper	8,8,5	Yes	2	Low	Multiple attachments at base; poor form and structure; dense crown.
201		Western sycamore	9	No	3	Moderate	Corrected lean W. toward creek; good vigor.
202		California pepper	6	No	2	Low	Trunk bows W. over creek; base outside of dripline.
203		California pepper	20	Yes	4	Moderate	Multiple attachments at 7'; fair form and structure; spreading crown.
204		California pepper	21	Yes	3	Moderate	Codominant trunks at 6'; decay at attachment; slightly thin crown.
205	412	California pepper	21	Yes	3	Low	Codominant trunks at 4'; decay at attachment and along stem; slightly thin crown.
206	411	Silver dollar gum	33	Yes	2	Low	Multiple attachments at 4'; very thin crown; extensive dieback.
207	410	Silver dollar gum	20	Yes	2	Low	Multiple attachments at 5'; very thin crown; twig and branch dieback.
208	409	California pepper	14	No	3	Moderate	Upright form; fair structure.
209		Aleppo pine	20	Yes	3	Moderate	Codominant trunks at 14'; good form; lower branch dieback.
210		Aleppo pine	21	Yes	2	Low	Severe lean S. over creek; base outside of dripline.
211		Aleppo pine	18	Yes	2	Low	Severe lean S. over creek; base outside of dripline.
212	405	Aleppo pine	20,18	Yes	2	Low	Codominant trunks at 2'; partial failure at base; girdling root.
213	404	Silver dollar gum	15	No	1	Low	Mostly dead.
214		Aleppo pine	19	Yes	3	Low	Codominant trunks at 11'; slight lean E.; base outside of dripline.
215		Aleppo pine	16	No	3	Moderate	Corrected lean S.; small high crown.
216		California pepper	6,5	No	2	Low	Codominant trunks at 1'; poor form and structure; suppressed.
217		Aleppo pine	15	No	2	Low	Codominant trunks at 10'; leans SE.; base outside of dripline.
218	399	Aleppo pine	23	Yes	3	Moderate	Corrected lean SE.; dense crown.
219		Aleppo pine	10	No	2	Low	Severe lean SE.; base outside of dripline; suppressed.
220		Aleppo pine	13	No	2	Low	Severe lean SE.; base outside of dripline; thin crown.
221		Aleppo pine	18	Yes	3	Moderate	Fair form and structure; slightly thin crown; lower branch dieback.
222	395	Aleppo pine	17	No	2	Low	Codominant trunks at 5'; serve lean NE.; base outside of dripline.
223		California pepper	11	No	2	Low	Codominant trunks at 3'; poor form and structure

Tree Assessment

Lake Cunningham
Flint Creek and Lower Silver Creek
San Jose, CA
October 2015

Tree Tag No.	Survey Data Point	Species	Trunk Diameter (in.)	Ord. Size Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
224	393	California pepper	22	Yes	3	Moderate	Codominant trunks at 4'; fair form and structure; slightly thin crown.
225	392	Aleppo pine	16	No	2	Low	Serve lean E. over creek; partial failure at base; base outside of dripline; dense crown.
226		California pepper	16,10	Yes	2	Low	Codominant trunks at 1'; 10" stem laying on ground; suppressed form.
227	390	Aleppo pine	21	Yes	3	Moderate	Slight lean W.; dense crown.
228		California pepper	18,8	Yes	3	Low	Codominant trunks at base and 4'; suppressed form.
229	388	Aleppo pine	28	Yes	4	High	Good form and structure; lower branch dieback.
230	387	Aleppo pine	18	Yes	2	Low	Thin crown; branch dieback.
231	386	Aleppo pine	27	Yes	3	Low	Multiple attachments at 6'; history of branch failure; slightly thin crown.
232		California pepper	24	Yes	3	Moderate	Codominant trunks at 4' and 6'; slight lean E. toward creek; suppressed on W.
233	384	California pepper	30	Yes	4	High	Codominant trunks at 3' and 4'; good form; spreading crown.
234	383	Aleppo pine	18	Yes	3	Moderate	Corrected lean; slightly thin crown.
235	382	Aleppo pine	19	Yes	3	Low	Partial failure at base; corrected lean E.; crowded form.
236	381	Aleppo pine	36	Yes	3	Moderate	Codominant trunks at 4'; fair form and structure; lower branch dieback.
237	380	Aleppo pine	14,7	Yes	2	Low	Failed at base; poor form and structure
238		California pepper	6	No	2	Low	Poor form and structure; suppressed.
239	378	Aleppo pine	33,21	Yes	2	Low	Codominant trunks at 2' and 8'; partial failure at base; slightly thin crown.
240		Aleppo pine	28	Yes	2	Low	Codominant trunks at 2' and 7'; partial failure at base; poor form and structure
241	376	Aleppo pine	31	Yes	2	Low	Corrected lean S.; base outside of dripline; trunk wound at base.
242		California pepper	29	Yes	3	Moderate	Multiple attachments at 13'; fair form and structure; twig dieback.
243	374	Aleppo pine	16	No	2	Low	Trunk bows E.; base outside of dripline; poor form.
244	373	California pepper	29	Yes	3	Moderate	Codominant trunks at 4'; fair form and structure; spreading crown.
245		California pepper	25	Yes	3	Moderate	Multiple attachments at 3'; heavy lateral limbs; hanging dead limb.
246		California pepper	28	Yes	4	High	Codominant trunks at 3'; spreading crown; lower limb dieback.

Tree Assessment

Lake Cunningham
Flint Creek and Lower Silver Creek
San Jose, CA
October 2015

HORT SCIENCE

Tree Tag No.	Survey Data Point	Species	Trunk Diameter (in.)	Ord. Size Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
247	365	California pepper	19	Yes	3	Moderate	Codominant trunks at 3'; asymmetrical form; leans N.
248		California pepper	32	Yes	4	High	Codominant trunks at 3' and 5'; spreading crown; suckers.
249	363	California pepper	28	Yes	4	High	Codominant trunks at 3' and 7'; spreading crown; twig dieback.
250	362	California pepper	29	Yes	3	Moderate	Multiple attachments at 2'; fair form and structure.
251		California pepper	13,8,7	Yes	2	Low	Multiple attachments at 2'; poor form and structure; dieback.
252	360	California pepper	29	Yes	4	High	Codominant trunks at 3'; spreading crown; lower branch dieback.
253	359	California pepper	18,17	Yes	3	Moderate	Codominant trunks at 1'; crowded form.
254	358	California pepper	12,11	Yes	2	Low	Codominant trunks at 1'; stems bow W.; base outside of dripline; crowded.
255	357?	California pepper	15,9,7	Yes	2	Low	Multiple attachments at 1'; stems bow W.; suppressed form.
256		California pepper	8,7,6	Yes	2	Low	Multiple attachments at base; suppressed form; dieback.
257		California pepper	12,9	Yes	3	Moderate	Codominant trunks at base; fair form and structure; twig dieback.
258		Red willow	20,16,15,15,13	Yes	2	Low	Failed at base in creek; branches overhang work limit; good vigor.
259	354	California pepper	38	Yes	4	High	Codominant trunks at 4'; spreading form; dense crown; heavy lateral limb.
260		Aleppo pine	19	Yes	3	Moderate	Codominant trunks at 3'; good form, fair structure; dense crown.
261	352	Aleppo pine	17,14	Yes	3	Moderate	Codominant trunks at 2'; fair form; leans SE.; hanging dead limb.
262		Red willow	9,8,8,7,6,5	Yes	3	Moderate	Base of tree in creek; thin crown.
263		Red willow	5,5,5,5,4,4	Yes	3	Moderate	Base of tree in creek; slightly thin crown.
264		Aleppo pine	19	Yes	3	Low	Codominant trunks high in crown; partial failure at base; leans SE. toward creek.
265		Aleppo pine	26	Yes	3	Low	Codominant trunks at 3'; partial failure at base; leans SE. over creek.
266		Aleppo pine	11,8	Yes	2	Low	Codominant trunks at 1' and 6'; poor form and structure; cavity in 8" stem.
267		California pepper	13	No	3	Low	Codominant trunks at 2'; fair form and structure; small crown.
268	345	Aleppo pine	18	Yes	3	Moderate	Codominant trunks at 3' and 7'; dense crown; partial failure at base; heavy lateral limb.
269		Aleppo pine	17	No	1	Low	Recent failure at base; crown of tree in creek.
270	343	Aleppo pine	26	Yes	2	Low	Codominant trunks at 3' and 6'; fair form; partial failure at base.

Tree Assessment

Lake Cunningham
Flint Creek and Lower Silver Creek
San Jose, CA
October 2015

Tree Tag No.	Survey Data Point	Species	Trunk Diameter (in.)	Ord. Size Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
271	342	California pepper	12,9	Yes	3	Moderate	Codominant trunks at 1'; stems bow SE. toward creek; twig dieback.
272	341	California pepper	23,13	Yes	3	Moderate	Codominant trunks at 1'; spreading crown; good form and vigor.
273	340	California pepper	18	Yes	4	Moderate	Codominant trunks at 3'; suppressed form.
274	339	California pepper	26	Yes	4	High	Codominant trunks at 5' and 9'; good form and structure.
275		California pepper	14,13,12	Yes	3	Moderate	Multiple attachments at 2'; spreading form; asymmetrical crown to S.
276	337	California pepper	14	No	3	Moderate	Codominant trunks at 3'; spreading form; asymmetrical crown; crowded.
277	336	California pepper	38,19	Yes	4	High	Good form; could remove 19" stem; twig dieback.
278		Red willow	10,7,5,4	Yes	2	Low	Multiple attachments at base; thin crown.
383	42036	Australian willow	3	No	3	Moderate	Codominant trunks at 4'; good form; minor twig dieback.
384	42035	Aleppo pine	10	No	5	High	Good form and structure; dense crown.
385	42037	Australian willow	3	No	3	Moderate	Multiple attachments at 9'; slightly thin crown.
386	42038	Aleppo pine	9	No	5	High	Good form and structure; dense crown; nursery stake strap girdling trunk.
387	42039	Australian willow	3	No	3	Moderate	Multiple attachments at 3'; slightly thin crown.
388	42040	Australian willow	3	No	3	Moderate	Multiple attachments at 6'; slightly thin crown.
389	42041	Silver maple	2	No	2	Low	Multiple attachments at base and 6'; drought stressed; twig dieback.
390	42042	Australian willow	4	No	3	Moderate	Multiple attachments at 3'; good form; minor twig dieback.
391	42043	Australian willow	3	No	2	Low	Fair form and structure; thin crown; dry leaves.
392	42044	Australian willow	3	No	3	Moderate	Codominant trunks at 3'; fair form and structure; slightly thin crown.
393	42045	Australian willow	4	No	3	Moderate	Multiple attachments at 3'; good form; minor twig dieback.
394	42046	Silver maple	2	No	2	Low	Multiple attachments at base and 6'; drought stressed; dead top.
395	42047	Silver maple	3	No	3	Moderate	Multiple attachments at 3' and 6'; good form.
396	42048	Australian willow	5	No	3	Moderate	Good form, fair structure; dense crown.
397	42049	Australian willow	6	No	2	Low	Partial failure at base; dense crown.

Tree Assessment

Lake Cunningham
Flint Creek and Lower Silver Creek
San Jose, CA
October 2015

HORT SCIENCE

Tree Tag No.	Survey Data Point	Species	Trunk Diameter (in.)	Ord. Size Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
398	42050	Australian willow	6	No	3	Moderate	Good form, fair structure; dense crown; nursery strap girdling trunk.
399	42051	Silver maple	3	No	3	Moderate	Fair form and structure; trunk sprouts.
400	42052	Aleppo pine	6	No	4	High	Good form and structure; slightly thin top.
401	42053	Aleppo pine	3	No	2	Low	Failing at the base; asymmetrical crown.
402	42054	Aleppo pine	4	No	3	Moderate	Group of 7 trees; swoops up at base; dense crown.
403	42055	Aleppo pine	3	No	4	High	Group of 7 trees; dense crown.
404	42056	Aleppo pine	5	No	4	High	Group of 7 trees; dense crown.
405		Aleppo pine	4	No	4	High	Group of 7 trees; multiple attachments at 3'; dense crown.
406	42058	Aleppo pine	4	No	4	High	Group of 7 trees; slight lean south; dense crown.
407		Aleppo pine	6,5	No	3	Moderate	Group of 7 trees; codominant trunks at base; dense crown.
408	42060	Aleppo pine	3	No	4	High	Good form and structure; good small tree.
409	42062	Australian willow	8	No	3	Moderate	Codominant trunks at 5'; good form, fair structure; dense crown.
410	42061	Evergreen ash	5,3,2,2,2	No	3	Low	Multiple attachments at base; trunk sprouts.
411		Australian willow	7	No	3	Moderate	Multiple attachments at 3'; branch failure; good form, fair structure.
412	42063	Silver maple	4	No	4	Moderate	Good form, fair structure; branch failure.
413	42065	Silver maple	3	No	4	Moderate	Good form, fair structure; branch failure.
414	42067	Silver maple	2	No	4	Moderate	Good form, fair structure; small tree.
415	42066	Australian willow	7	No	3	Moderate	Multiple attachments at 4'; good form; dense crown.
416	42068	Australian willow	6	No	2	Low	Partial failure at base; dense crown.
417	42069	Australian willow	7	No	3	Moderate	Codominant trunks at 4' with narrow attachment; good form.
418	42070	Evergreen ash	6	No	3	Moderate	Codominant trunks at 4' with narrow attachment; dense crown.
419	42071	Evergreen ash	3,3,2,2	No	3	Low	Multiple attachments at base; poor structure; dense crown.
420	42072	Australian willow	4	No	3	Moderate	Fair structure; small crown.
421	42073	Silver maple	2	No	3	Moderate	Good form, fair structure.
422	42074	Australian willow	6	No	3	Moderate	Multiple attachments at 4'; good form, fair structure; dense crown.
423	42075	Silver maple	2	No	3	Moderate	Small crown; twig dieback.
424	42076	Australian willow	4	No	4	High	Good form and structure; slightly thin crown.

June 14, 2017

Chris Strasser
HT Harvey and Associates
983 University Ave.
Los Gatos, CA 95032

Subject: Addendum Letter Lake Cunningham Detention Facility Project

Dear Chris Strasser,

The Santa Clara Valley Water District is planning construction of the Cunningham Flood Detention Facility in San Jose, CA. HortScience wrote an Arborist Report for the project dated September 7, 2016. The pedestrian pathway in the northeastern corner of the project has been reconfigured since the Arborist Report was finalized. This letter evaluates the impact to trees of that pedestrian pathway.

I visited the site on May 18th. Data from the Tree Assessment in the Arborist Report was current, and I made no updates. Trees included in this area are shown on the Tree Inventory Map and in the attached Tree Assessment. Forty-four (44) trees were evaluated all of which were included in the previous Arborist Report.

I used the Pedestrian Access Path: Tree Demolition Plan created by HT Harvey dated April 2017 to evaluate impacts. Of the 44 trees,

- Twenty-six (26) trees can be preserved. For these trees, follow the Tree Preservation Guidelines in the Arborist Report.
    - #145-150, 167, 171, 189-205 and 209
- Three trees are being removed because of their proximity to the planned floodwall and are listed as to be removed in the Arborist Report.
    - #159, 160, 206
- One has previously failed and was on the ground (Photo 1).
    - #169
- Fourteen (14) trees need to be removed to construct the pedestrian path.
    - Two trees are within path and must be removed to complete construction.
        - #154 and 168
    - Five trees are within 5 feet of the path and are likely to experience severe root injuries. I recommend removing these trees because they are unlikely to survive construction impacts.
        - #156, 164-166 and 170
    - Three trees will be leaning over the path (Photo 2). I recommend removing these trees for safety
        - #157, 158, 163
    - Four trees are low value and close to construction (Photo 3). These trees could potentially be preserved, but their removal will allow easier access to construction crews.
        - #151-153, 155

If you have any questions about my observations or recommendations, please contact me.

Ryan Gilpin, M.S.
Environmental Analyst, HortScience Inc.
Certified Arborist #WE-10268A

Photo Attachment

Photo 1 - Tree #169 failed prior to my visit.

Photo 2 - Three trees (#157, 158 and 163) are leaning over the future path.

Photo Attachment

Photo 3 - Trees #151-153 and 155 are low value trees growing near the future path.

Tree Disposition

Lake Cunningham Pedestrian Access Path
San Jose, CA
May 18, 2017

Tree No.	Species	Other ID	Disposition	Category	Comment
145	Purpleleaf plum	33014	Preserve		
146	Silver dollar gum	33013	Preserve		
147	Purpleleaf plum	33012	Preserve		
148	Purpleleaf plum	33010	Preserve		
149	Purpleleaf plum	33011	Preserve		
150	Purpleleaf plum	33009	Preserve		
151	Purpleleaf plum	452	Remove	Low value	4 feet from path
152	Purpleleaf plum	451	Remove	Low value	9 feet from path
153	Purpleleaf plum	450	Remove	Low value	5 feet from path
154	Purpleleaf plum	449	Remove	Within path	Within path
155	Purpleleaf plum	448	Remove	Low value	7 feet from path
156	Aleppo pine	447	Remove	Not survive	4 feet from path
157	Aleppo pine	446	Remove	Leaning	Leaning over path
158	Aleppo pine	445	Remove	Leaning	Leaning over path
159	Silver dollar gum	444	Already on removal list		
160	Silver dollar gum	443	Already on removal list		
163	Aleppo pine	440	Remove	Leaning	Leaning over path
164	Silver dollar gum	439	Remove	Not survive	Adjacent to path
165	Silver dollar gum	438	Remove	Not survive	Adjacent to path
166	Western sycamore	437	Remove	Not survive	Adjacent to path
167	Western sycamore	436	Preserve		12 feet from path
168	Western sycamore	435	Remove	Within path	Within path
169	Aleppo pine	434	Previously failed		
170	Aleppo pine	433	Remove	Not survive	5 feet from path
171	Evergreen ash	432	Preserve		
189	Western sycamore	431	Preserve		

Tree Disposition

Lake Cunningham Pedestrian Access Path
San Jose, CA
May 18, 2017

Tree No.	Species	Other ID	Disposition	Category	Comment
190	Western sycamore	430	Preserve		
191	Silver dollar gum	429	Preserve		
192	Carob	427	Preserve		
193	Silver dollar gum	426	Preserve		
194	Olive	425	Preserve		
195	Western sycamore	424	Preserve		
196	Carob	423	Preserve		
197	Silver dollar gum	422	Preserve		
198	California pepper	421	Preserve		
199	California pepper	420	Preserve		
200	Brazilian pepper	418	Preserve		
201	Western sycamore	417	Preserve		7 feet from path
202	California pepper	416	Preserve		11 feet from path
203	California pepper	414	Preserve		12 feet from path
204	California pepper	413	Preserve		
205	California pepper	412	Preserve		
206	Silver dollar gum	411	Already on removal list		
209	Aleppo pine	408	Preserve		

Tree Assessment

Lake Cunningham Pedestrian Access Path
San Jose, CA
May 18, 2017

HORT SCIENCE

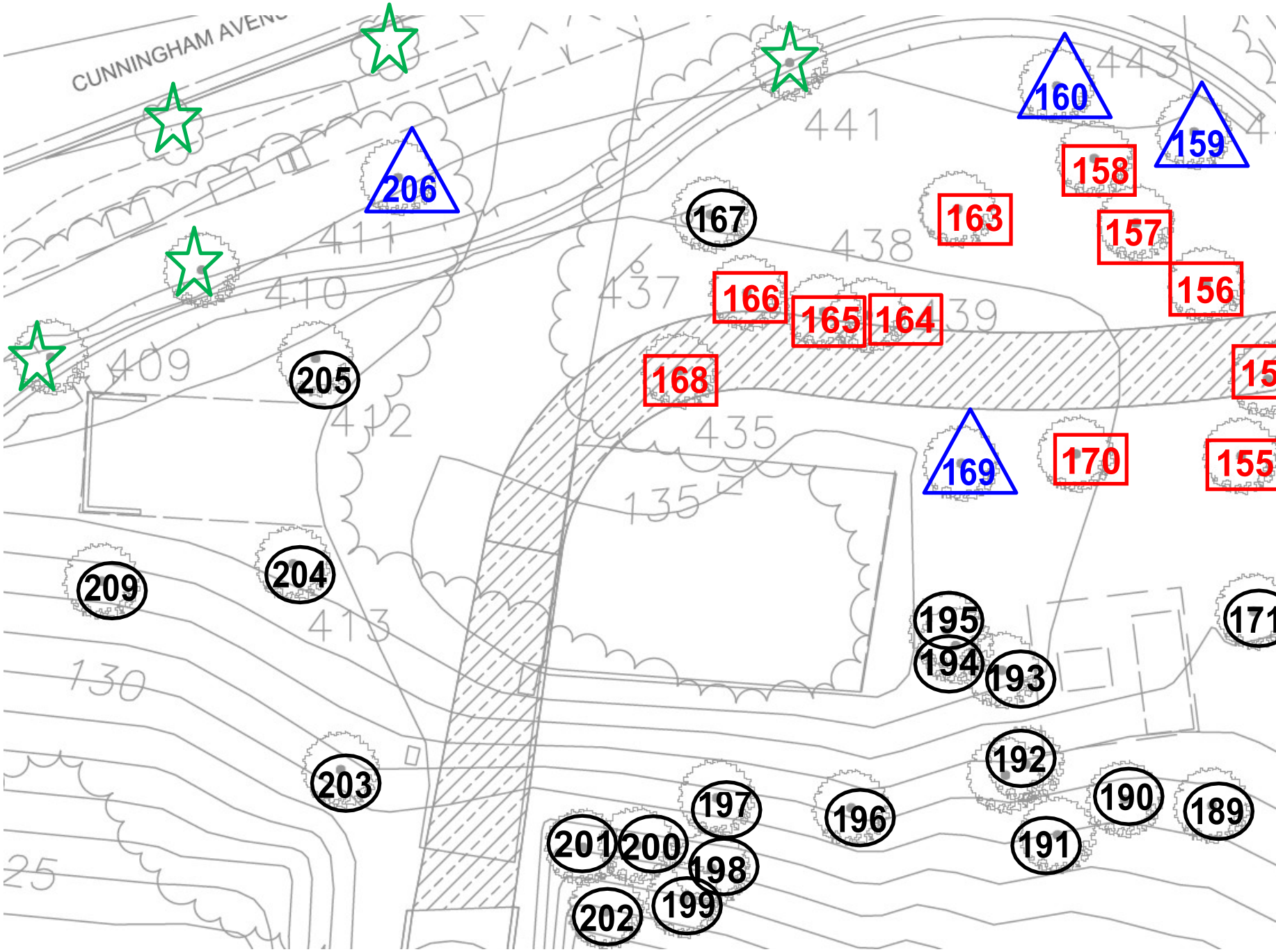
Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
145	Purpleleaf plum	4	No	2	Low	Codominant trunks at 4'; poor form and structure.
146	Silver dollar gum	4	No	2	Low	Small thin crown.
147	Purpleleaf plum	5	No	2	Low	Codominant trunks at 3'; fair form, poor structure.
148	Purpleleaf plum	6	No	2	Low	Codominant trunks at 3'; poor form and structure; trunk wound.
149	Purpleleaf plum	8,5	No	3	Low	Codominant trunks at base; fair form; twig dieback.
150	Purpleleaf plum	7	No	2	Low	Base outside of dripline; poor form and structure.
151	Purpleleaf plum	7	No	2	Low	Codominant trunks at 8'; poor structure.
152	Purpleleaf plum	5	No	2	Low	Poor form and structure; twig dieback.
153	Purpleleaf plum	4	No	3	Low	Small crown; crowded.
154	Purpleleaf plum	4	No	2	Low	Codominant trunks at 3'; fair form, poor structure.
155	Purpleleaf plum	6	No	3	Low	Multiple attachments at 5'; fair form and structure.
156	Aleppo pine	28	Yes	4	Moderate	Good form and structure; slightly thin crown.
157	Aleppo pine	11	No	2	Low	Serve lean S.; base outside of dripline.
158	Aleppo pine	19	Yes	3	Low	Leans S.; base outside of dripline; dense crown.
159	Silver dollar gum	30	Yes	2	Low	Multiple attachments at 3'; thin crown; dieback; dead stem; trunk wounds.
160	Silver dollar gum	17	No	1	Low	Mostly dead.
163	Aleppo pine	20	Yes	3	Low	Corrected lean S.; base outside of dripline.
164	Silver dollar gum	6,6	No	3	Moderate	Codominant trunks at 2' and 4' with narrow attachments; small crown.
165	Silver dollar gum	15	No	3	Low	Multiple attachments at 15' with narrow attachments; fair form.
166	Western sycamore	8	No	3	Moderate	Fair form and structure; small crown.
167	Western sycamore	11	No	4	Moderate	Slightly asymmetrical form; good vigor.
168	Western sycamore	18	Yes	4	High	Codominant trunks high in crown; good vigor.
169	Aleppo pine	23	Yes	3	Moderate	Corrected lean W.; base outside of dripline.
170	Aleppo pine	23	Yes	3	Moderate	Slight lean E.; good form.

Tree Assessment

Lake Cunningham Pedestrian Access Path
San Jose, CA
May 18, 2017

HORT SCIENCE

Tree No.	Species	Trunk Diameter (in.)	Protected Tree?	Condition 1=poor 5=excellent	Suitability for Preservation	Comments
171	Evergreen ash	7	No	4	Moderate	Codominant trunks at 14'; good small tree.
189	Western sycamore	10	No	3	Moderate	Trunk bows N.; good vigor.
190	Western sycamore	11	No	4	High	Codominant trunks high in crown; good vigor.
191	Silver dollar gum	16,10,7	Yes	2	Low	Multiple attachments at 2'; thin crown; narrow form; dieback.
192	Carob	5,4	No	3	Moderate	Codominant trunks at 1'; dense crown.
193	Silver dollar gum	8	No	2	Low	Codominant trunks at 16'; trunk wound high in crown; small crown.
194	Olive	5,4,4,2,2	No	3	Moderate	Multiple attachments at 1'; fair form and structure.
195	Western sycamore	7	No	3	Moderate	Trunk bows N.; fair form and structure; good vigor.
196	Carob	5,4,2	No	3	Moderate	Multiple attachments at base; dense crown.
197	Silver dollar gum	28	Yes	3	Moderate	Codominant trunks at 15'; slightly thin crown; twig dieback.
198	California pepper	13	No	3	Low	Codominant trunks at 3'; trunks bow W. over creek.
199	California pepper	7	No	2	Low	Trunk bows W. over creek; base outside of dripline.
200	Brazilian pepper	8,8,5	Yes	2	Low	Multiple attachments at base; poor form and structure; dense crown.
201	Western sycamore	9	No	3	Moderate	Corrected lean W. toward creek; good vigor.
202	California pepper	6	No	2	Low	Trunk bows W. over creek; base outside of dripline.
203	California pepper	20	Yes	4	Moderate	Multiple attachments at 7'; fair form and structure; spreading crown.
204	California pepper	21	Yes	3	Moderate	Codominant trunks at 6'; decay at attachment; slightly thin crown.
205	California pepper	21	Yes	3	Low	Codominant trunks at 4'; decay at attachment and along stem; slightly thin crown.
206	Silver dollar gum	33	Yes	2	Low	Multiple attachments at 4'; very thin crown; extensive dieback.
209	Aleppo pine	20	Yes	3	Moderate	Codominant trunks at 14'; good form; lower branch dieback.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Santa Clara Valley Water District

MEMORANDUM

FC 14 (01-02-07)

TO: Kurt Lueneburger, Tim Tidwell
SCVWD

FROM: John Chapman, Vegetation Program Specialist / Certified Arborist

SUBJECT: Tree Assessment for Cunningham Flood Detention Facility Certification Project. Street Tree, Floodwall and Levee Areas

DATE: July 7, 2017

Introduction

Our arborist services were requested to support the Lake Cunningham Flood Detention Facility Certification Project in San Jose, California. The proposed project includes improvements to existing infrastructure along Flint Creek and Lower Silver Creek as they pass through the City of San Jose's Lake Cunningham Park. Improvements include raising the existing earthen levee along Lower Silver Creek and the addition of a concrete floodwall along a portion of Flint Creek. These areas will be referred to in this report as "Levee Area" and "Floodwall Area". A third zone includes the boulevard planting swale parallel to Cunningham Ave. and immediately adjacent to the other project areas, which includes 30 street trees between the intersection of White Rd. and the Lower Silver Creek crossing. This area will be referred to as "Street Tree Area". See Figures 1, 3 and 4, and the attached Site Map for more information.

Project Background

An arborist report by HortScience, Inc. (September 2016) provides an evaluation of the trees located within the project area, tree protection guidelines, and recommendation for tree removal/pruning based on project impacts. An addendum letter to this report was provided by HortScience, Inc. (June 2017), recommending additional tree removals to accommodate the realignment of a pedestrian path within the park. Some data gaps were discovered when comparing the arborist reports and project plans, so we were asked to reevaluate select trees in the project area.

The Street Tree area represents an additional project impact that was not evaluated in either of the previous reports. This area includes relatively young boulevard trees that are being proposed for removal to create access and staging areas for the construction project. All of the trees in this area are non-native landscape ornamentals. The results of our assessment for this new area are detailed in Table 1.

Methods

Our site inspections were conducted on July 5 and 6, 2017, consisting of basic visual assessments for select trees in the Levee and Floodwall areas, and all the trees in the Street Tree area. We used the existing tree data for the former two areas and collected the following information for the Street Tree area:

Species/Diameter Breast Height (DBH)/Growth Form/Canopy Area/Condition/Comments

The overall health and vigor, or condition, of the trees were evaluated based on the following criteria:

- Good (G) – healthy and vigorous tree with minimal evidence of disease or structural defects; growth rate and form typical for the species
- Fair (F) – tree minor defects or signs of disease, partial die-back of some branches or plant parts
- Poor (P) – significant symptoms of defect or disease, dead portions of canopy or large branches; large, poorly healed wounds from mechanical injury or branch tear suggesting internal decay
- Dead (D) – no visible live growth on tree during growing season, branches brittle, canopy dead; may include trees with some root shoots forming at tree base but main trunk is dead

Each tree was marked with a debossed aluminum tree tag and representative photos of the site were captured.

New Recommendations – Levee and Floodwall Areas

Thirty trees in the Levee and Floodwall areas were reevaluated as part of our assessment (Table 2). These included trees that were either not proposed for removal in the two previous reports by HortScience, Inc. or the recommendations for removal were not transferred to the 90% design plans. Pruning only was proposed for several of these trees, based on recommendations and guidelines for construction laid out in the September 2016 report (eg. Tree tag #259, 272, and 274). Based on our field inspections, the proximity of the tree to the construction impact area, tree condition, and potential for root injury and/or root zone compaction during construction, makes removal, rather than pruning, a more realistic option (Figure 5). If pruning only is the chosen path, the trees must be monitored by a certified arborist for at least three year's post-construction to document any decline in health and vigor. Several of these trees, should they decline and potentially fail, could become hazardous to park users, pedestrians/motorists along Cunningham Ave., and to the new floodwall itself.

Of the 30 trees evaluated in the Levee and Floodwall areas, 23 are recommended by us for removal (see "SCVWD Recommendations", Table 2). The remaining seven trees (Tree tag #396, 408, 167, 253, 259, 272, and 274) if not removed, will require monitoring both during construction and post construction per the guidelines outlined in the September 2016 report ("Tree Preservation Guidelines", p.8-10).

Trees #259 and 272, recommended for pruning only by HortScience, Inc., will require greater than 25% canopy pruning to accommodate construction equipment, a practice that can lead to abnormal re-growth and the potential development of hazardous conditions. Both the International Society of Arboriculture and HortScience, Inc. (September 2016 report) discourages this practice. Given the situation, we believe removal of these trees to be a better option.

Tree #162, a black walnut, was incorrectly identified as a Chinese pistache, and no recommendation was provided in previous reports. Given its proximity to the proposed floodwall and the invasive behavior of this species in riparian areas, we strongly recommend removal while the tree is still small and manageable (Figure 6).

For reference, notation was added to copies of the provided project plans indicating our recommendations for the thirty trees assessed in the Levee and Floodwall areas. The notated plans are included as attachments to this report.

Results - Street Tree Area

The thirty trees in this area parallel with Cunningham Ave. are being proposed for removal to provide construction access and space for vehicle/equipment staging adjacent to an otherwise busy residential street. These ornamental trees include 10 Bradford pear, 9 Chinese pistache, and 11 Silver maple. The trees all

appeared of similar age (less than 10yrs.), stature, and showed minor variations in health or condition. Several of the trees were producing copious root sprouts or suckers, likely due to drought stress over the last several years. Four of the trees were completely dead, all Silver maples (Figure 2). As a group, these relatively young trees provide minimal screening in their current condition between the park and the residents along Cunningham Ave.

Figure 1 – Bradford pear, typical of Street Tree area. Note root suckers at base.

Figure 2 – Dead Silver Maple in Street Tree area.

<u>Recommendations – Street Tree Area</u>

Removal of these trees will greatly enhance the accessibility of the proposed project area and provide greater flexibility during construction. An alternative approach would be to designate a Tree Protection Zone around groups of trees in this area and limit access to a few, wide points where trees can be removed. Trees near the eastern and western ends of the area would be best suited for removal due to higher activity levels and observed tree condition (several dead trees towards west end). Trees #ST10-20 for example could be protected during construction to minimize impacts and avoid replanting costs. Tree protection, if desired, should follow the guidelines outlined in the September 2016 report ("Tree Preservation Guidelines", p.8-10).

The conclusions in this report are not meant to replace or undermine the findings by HortScience, Inc., but rather to clarify the scope of work regarding the trees onsite. All recommendations and treatments presented in the "Tree Preservation Guidelines" of the September 2016 report are critical to the long-term health of the trees remaining within the project area post construction and should be adhered to.

Please feel free to contact Rebecca Wolff or myself if you have additional questions regarding these findings.

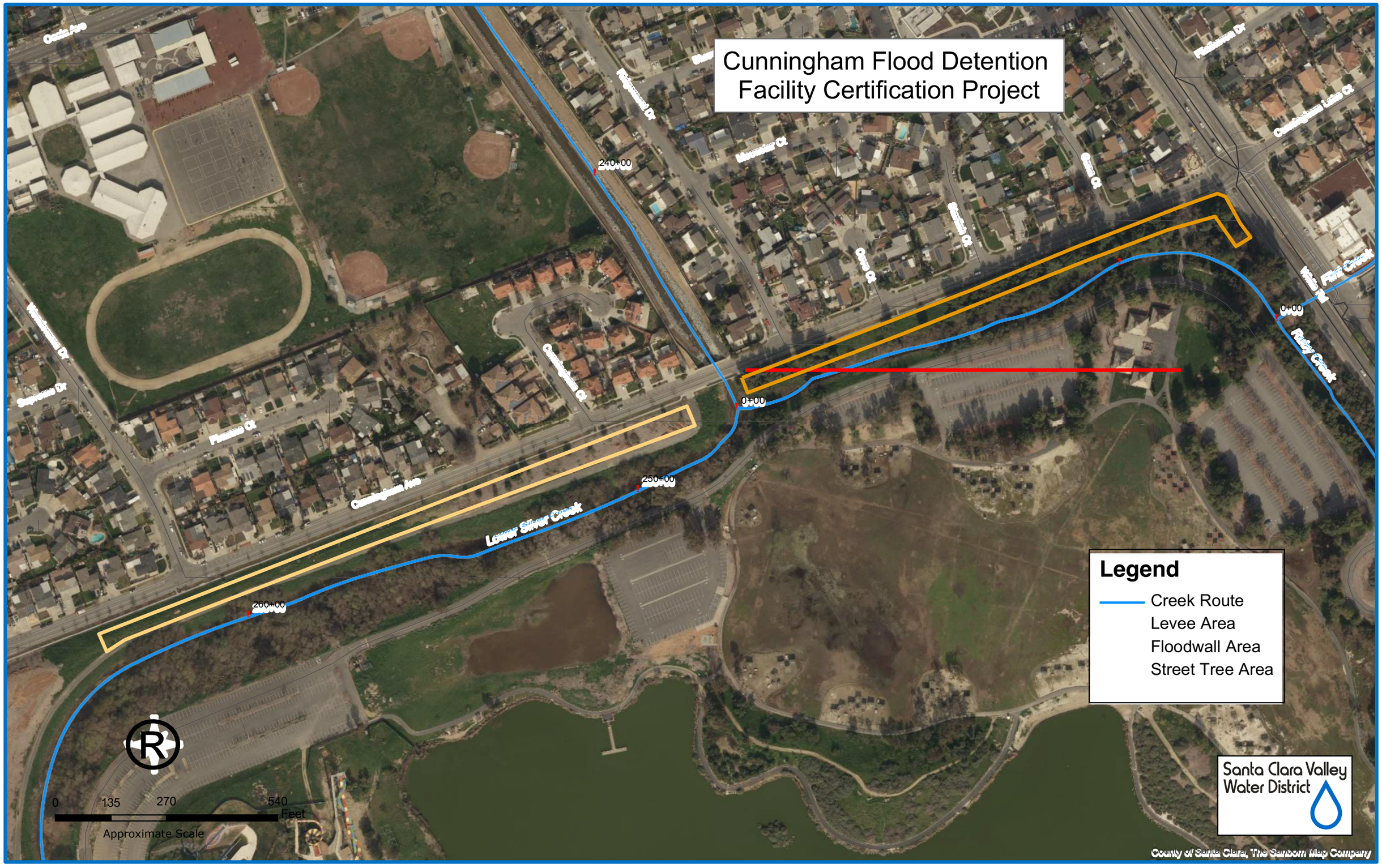
John Chapman
Vegetation Program Specialist
Certified Arborist #WE-7227A
jchapman@valleywater.org

Figure 3 – Levee Area typical, located between Lower Silver Creek and Cunningham Ave. Note small ornamental trees planted in middle of mulched area.

Figure 4 – Floodwall Area typical, located between Flint Creek and Cunningham Ave. and with mature ornamental trees growing adjacent to project area. Street Tree area visible just beyond chain link fence.

Figure 5 – Trees in Floodwall area have root zone extending into construction impact area. Note 2-inch diameter root near top left of clipboard and more than 6 feet from base of tree.

Figure 6 – Tree #162 in Floodwall area is an invasive black walnut, not a Chinese pistache as previously reported. Removal recommended.


Cunningham Flood Detention Facility Certification Project
Legend
Creek Route
Levee Area
Floodwall Area
Street Tree Area
Santa Clara Valley Water District
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Approximate Scale
240+00
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Lower Silver Creek
Cunningham Ave
Flint Creek
Ruby Creek
County of Santa Clara, The Sanborn Map Company

Table 1
Street Tree Area

Date: 7/6/2017 10am
Inspectors: John Chapman, Rebecca Wolff
Project: Cunningham Flood Detention Facility Certification Project

Tree #	Species	Type (S or M)	DBH (in)	Canopy length(ft)	Canopy width(ft)	Condition (G/F/P/D)	Notes
ST-1	Bradford pear	S	6	10	10	G	@ White x Cunningham
ST-2	Chinese pistache	S	5	12	10	G	
ST-3	Bradford pear	S	5	10	10	G	
ST-4	Chinese pistache	S	3	10	10	G	
ST-5	Bradford pear	S	4.5	8	8	G	suckers
ST-6	Silver maple	S	2.5	8	8	F	suckers
ST-7	Silver maple	S	3.5	10	10	G	suckers @ Gana Ct
ST-8	Chinese pistache	S	4	8	8	G	@ 3063 Cunningham (2 missing before)
ST-9	Bradford pear	S	6.5	10	10	G	@ 3063 Cunningham
ST-10	Bradford pear	S	4.5	8	8	F	@ 3057 Cunningham ; thin canopy
ST-11	Chinese pistache	S	4.5	12	10	F	canopy thin; irregular form
ST-12	Silver maple	S	4.5	10	10	G	suckers; AMRO nest
ST-13	Silver maple	S	3	10	10	F	@ Starfish ct; thin canopy, suckers
ST-14	Silver maple	S	3.5	12	10	G	suckers
ST-15	Bradford pear	S	5	10	10	G	suckers
ST-16	Chinese pistache	S	4.5	12	12	G	thin canopy
ST-17	Bradford pear	S	4	6	6	F	thin canopy, suckers
ST-18	Chinese pistache	S	6	10	10	G	
ST-19	Bradford pear	S	6	12	10	G	suckers
ST-20	Silver maple	S	3	4	4	D	@ Cove Ct.
ST-21	Silver maple	S	2	5	5	F	@ CL Cove Ct. ; suckers, weak
ST-22	Silver maple	S	5	12	10	F	thin canopy, suckers
ST-23	Chinese pistache	S	7.5	12	12	G	
ST-24	Chinese pistache	S	7.5	15	12	G	
ST-25	Bradford pear	S	6	12	12	F	suckers, twig death
ST-26	Silver maple	S	2	4	4	D	
ST-27	Silver maple	S	2.5	4	4	D	@ Ridgemont Dr
ST-28	Silver maple	S	2	4	4	D	
ST-29	Chinese pistache	S	3	8	8	G	
ST-30	Bradford pear	S	3	8	8	G	minor suckers
	Type:	S = single trunk			Condition:	G=Good	
		M = multi trunk				F=Fair	
						P=Poor	
						D=Dead	
							Total trees assessed = 30

Table 2
Levee and Floodwall Areas

Date: 7/5/2017 1:30pm
Inspectors: John Chapman, Rebecca Wolff, Tim Tidwell
Project: Cunningham Flood Detention Facility Certification Project

Area	Tree Tag ID	Survey Data Point	Species	DBH (in)	Ord. Size	Hort Science Condition Rating	Hort Science Suitability for Preservation	Hort Science Recommendation	Hort Science Notes
Levee	395	42047	Silver maple	3	N	3	Moderate	N/A	Multiple attachments at 3' and 6'
Levee	396	42048	Australian willow	5	N	3	Moderate	N/A	Good form, fair structure, dense
Levee	397	42049	Australian willow	6	N	2	Low	N/A	Partial failure at base; dense cro
Levee	398	42050	Australian willow	6	N	3	Moderate	N/A	Good form, fair structure; dense cr girdling trunk.
Levee	400	42042	Aleppo pine	6	N	4	High	N/A	Good form and structure; slightly
Levee	405	N/A	Aleppo pine	4	N	4	High	N/A	Group of 7 trees; multiple attachme crown.
Levee	406	42058	Aleppo pine	4	N	4	High	N/A	Group of 7 trees; slight lean sout
Levee	407	42059	Silver maple	4	N	N/A	N/A	N/A	N/A
Levee	408	42060	Aleppo pine	3	N	4	High	N/A	Good form, structure
Levee	410	42061	Evergreen ash	5,3,2,2,2	N	3	Low	N/A	Multiple attachments at base; tru
Levee	412	42063	Silver maple	4	N	4	Moderate	N/A	Good form, fair structure; branch
Levee	414	42067	Silver maple	2	N	4	Moderate	N/A	Good form, fair structure; small t
Levee	416	42068	Australian willow	6	N	2	Low	N/A	Partial failure at base; dense cro
Levee	420	42072	Australian willow	4	N	3	Moderate	N/A	Fair structure; small crown.
Levee	421	42073	Silver maple	2	N	3	Moderate	N/A	Good form, fair structure.
Levee	422	42074	Australian willow	6	N	3	Moderate	N/A	Multiple attachments at 4'; good dense crown.
Levee	424	42076	Australian willow	4	N	4	High	N/A	Good form and structure; slightly
Floodwall	162	441	Black walnut	7	N	4	High	N/A	Good small tree
Floodwall	167	436	Western sycamore	11	N	4	Moderate	N/A	Slightly asym. Crown, good vigo
Floodwall	218	399	Aleppo pine	23	Y	3	Moderate	Recommend Removal	Corrected lean SE, dense crown
Floodwall	229	388	Aleppo pine	28	Y	4	High	Prune	Good form, structure; lower bran
Floodwall	234	383	Aleppo pine	18	Y	3	Moderate	N/A	Corrected lean, slightly thin crow
Floodwall	235	382	Aleppo pine	19	Y	3	Low	Prune	Partial fail at base, crowded form

Table 2
Levee and Floodwall Areas

Floodwall	239	378	Aleppo pine	33,21 (M)	Y	2	Low	Recommend Removal	Co-dom trunks, partial fail at bas
Floodwall	243	374	Aleppo pine	16	N	2	Low	Recommend Removal	Trunk bow SE, base outside drip
Floodwall	253	359	Peruvian pepper	18,17 (M)	Y	3	Moderate	Prune	Co-dom trunks, crowded
Floodwall	254	358	Peruvian pepper	12,11 (M)	Y	2	Low	Recommend Removal	Co-dom trunks, stems bow W, cr
Floodwall	259	354	Peruvian pepper	38	Y	4	High	Prune	Co-dom trunks, spreading form, d lateral, pruning recommended
Floodwall	272	341	Peruvian pepper	23,13 (M)	Y	3	Moderate	Prune	Co-dom trunks, spreading crown
Floodwall	274	339	Peruvian pepper	26	Y	4	High	Prune	Co-dom trunks, good form / str

Total trees assessed = 30

City of San Jose ordinance size = 18' DBH

(M) = multi trunk

1 = poor condition
5 = best condition

N/A = No recommendation provided

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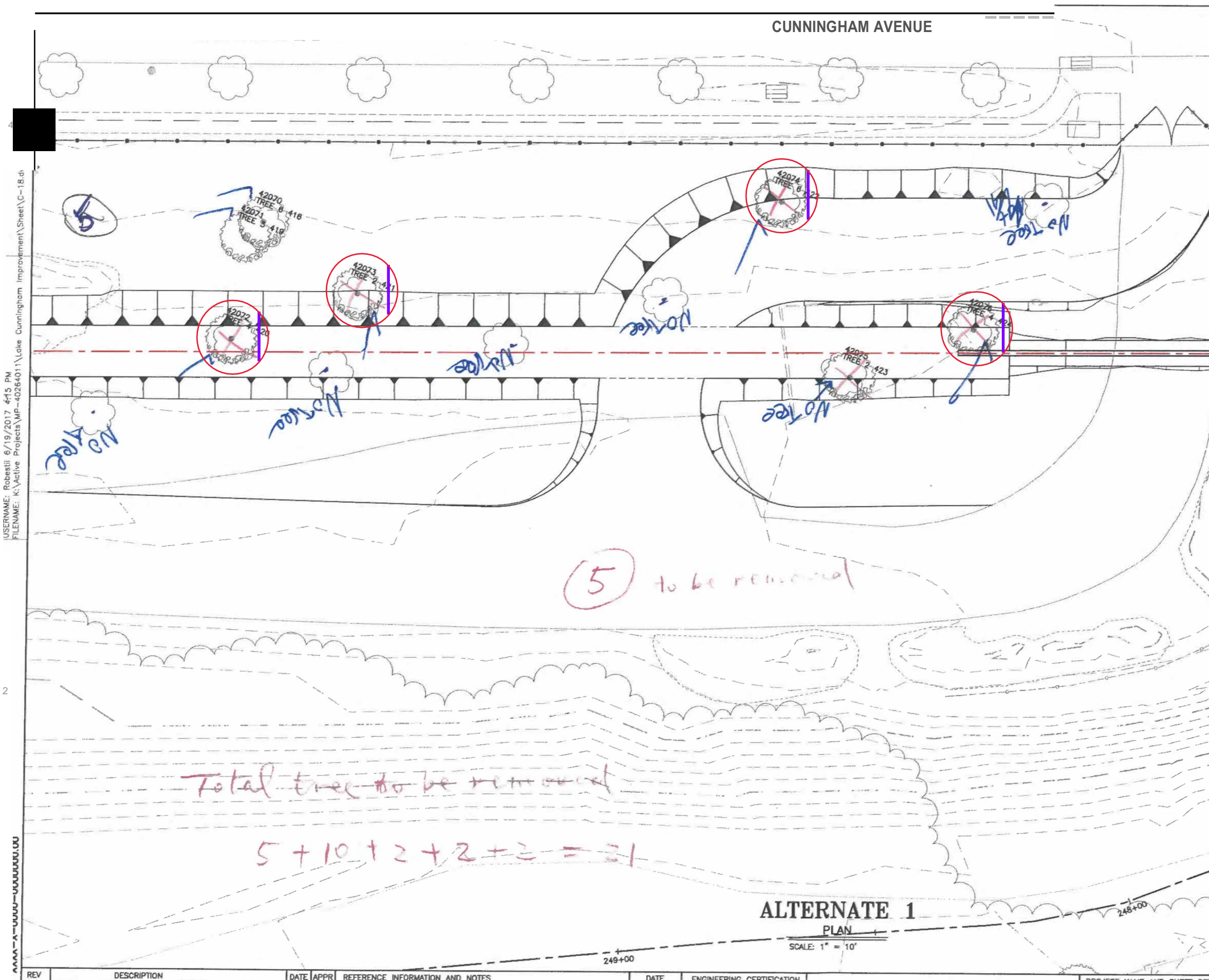

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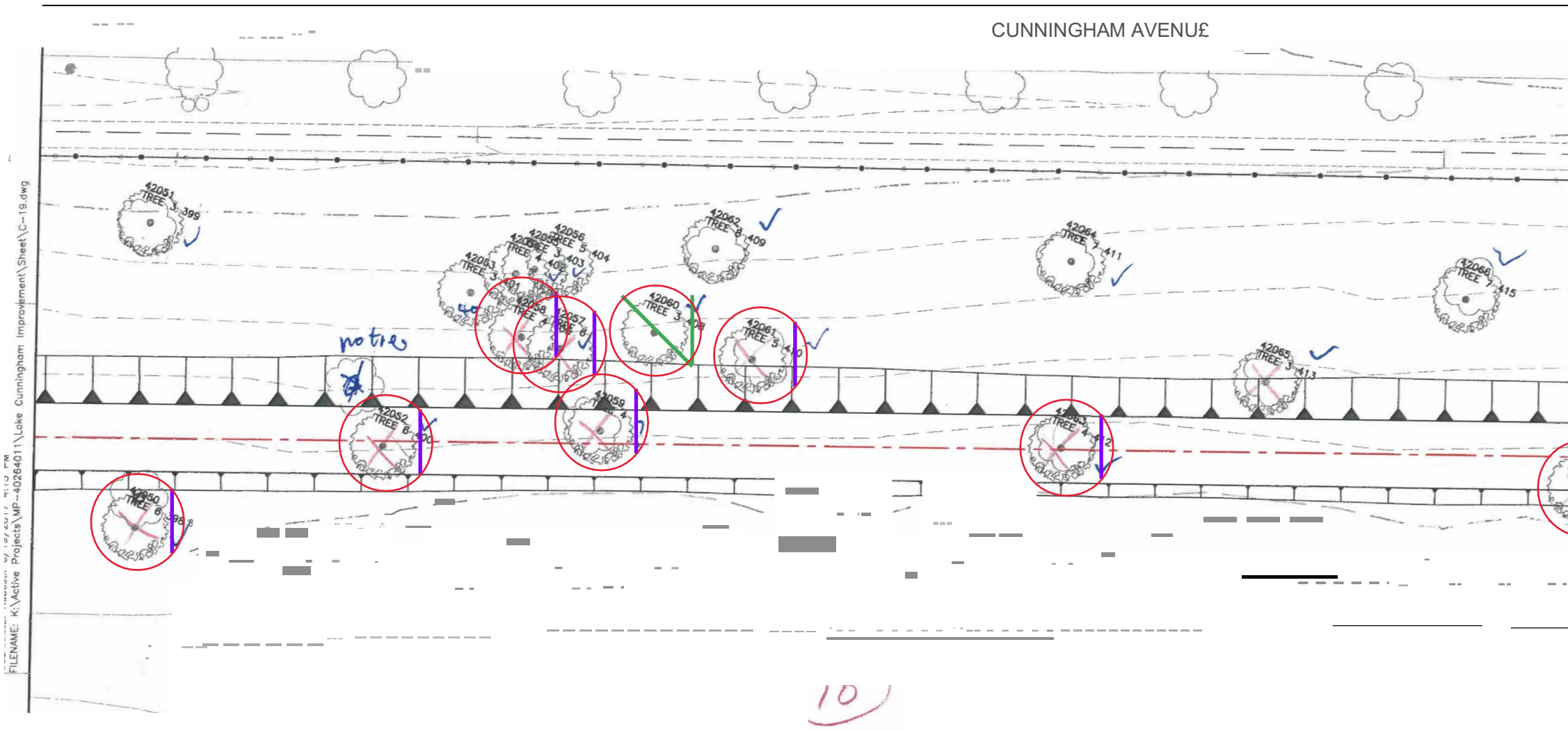

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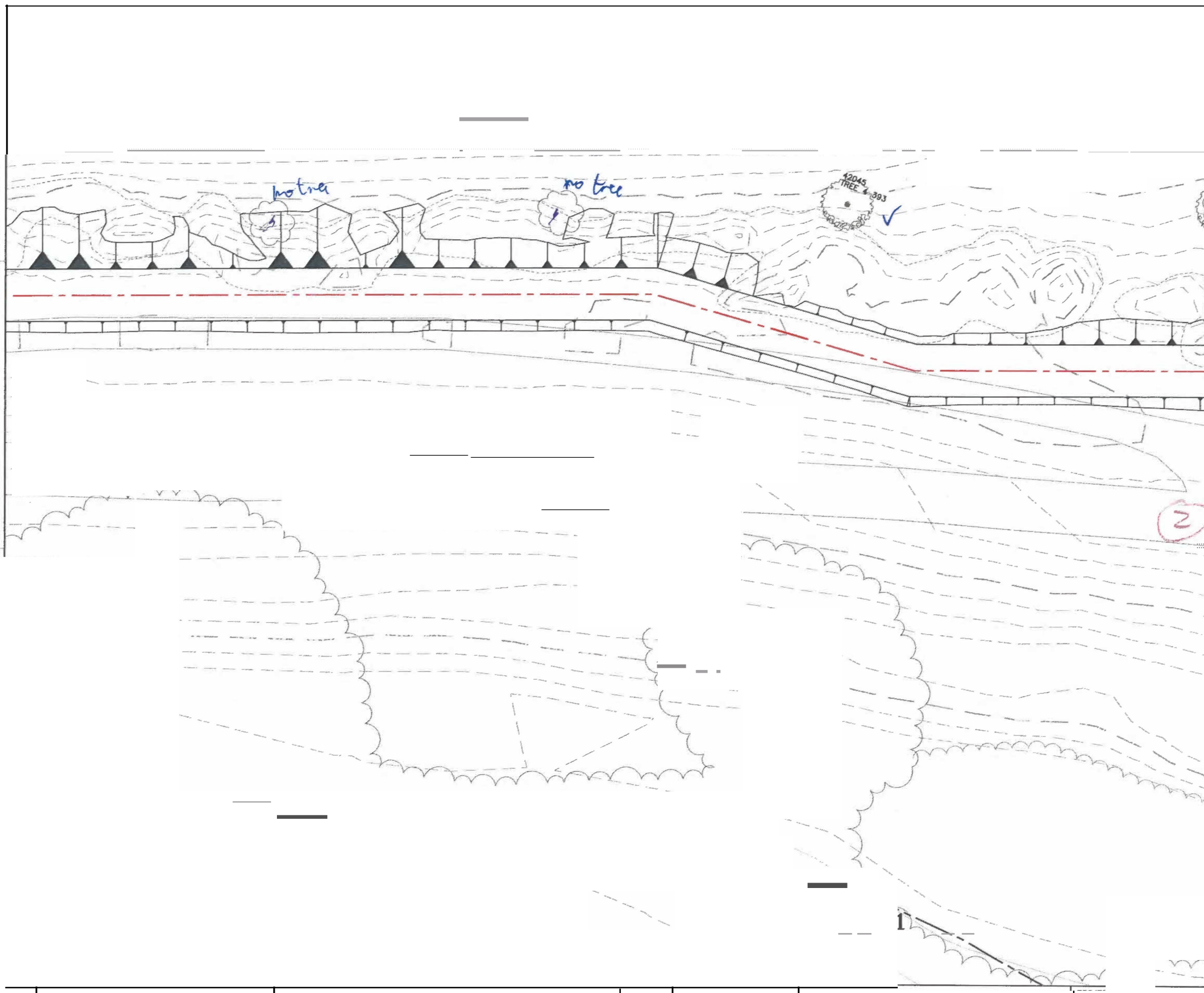

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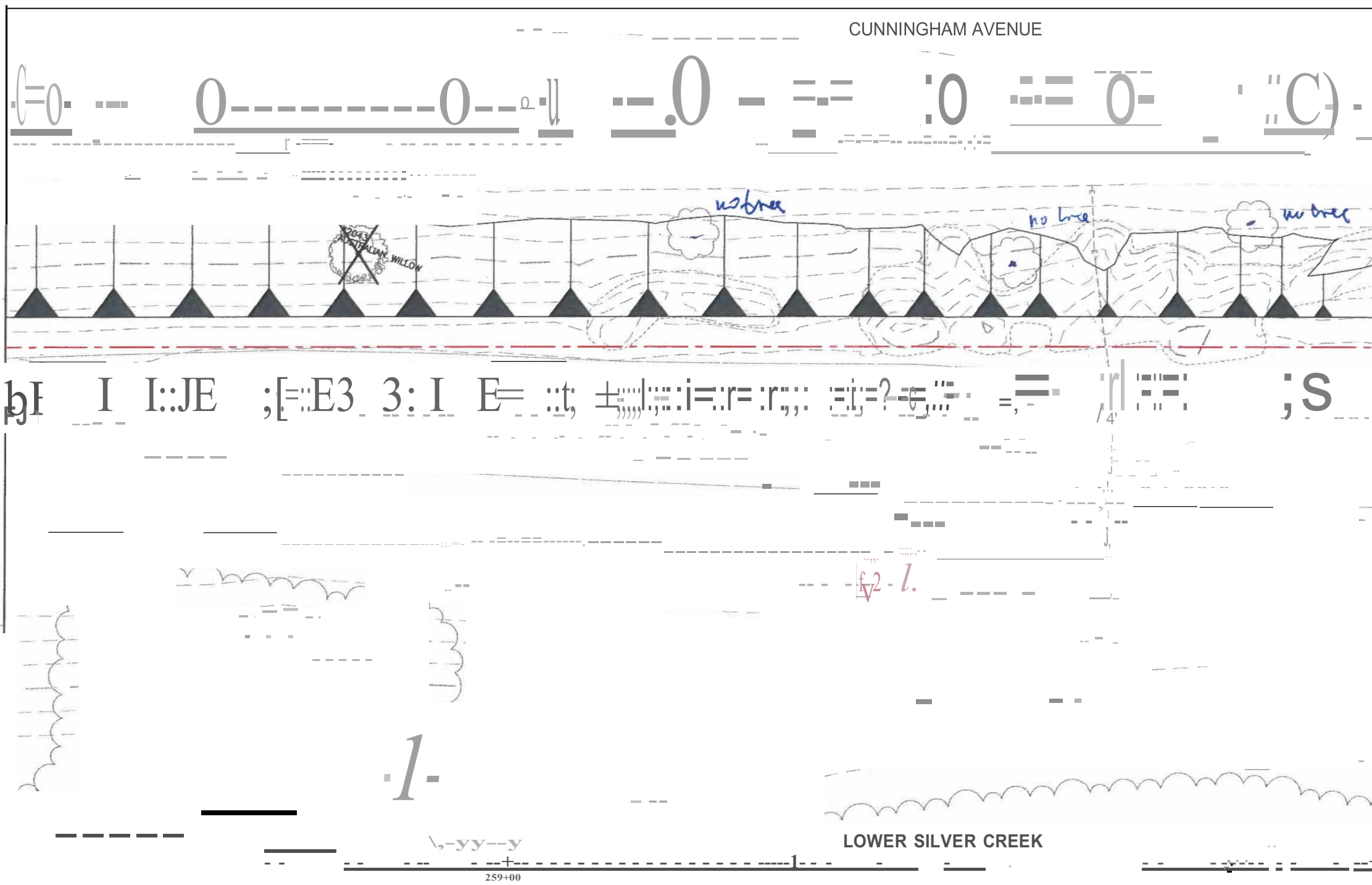

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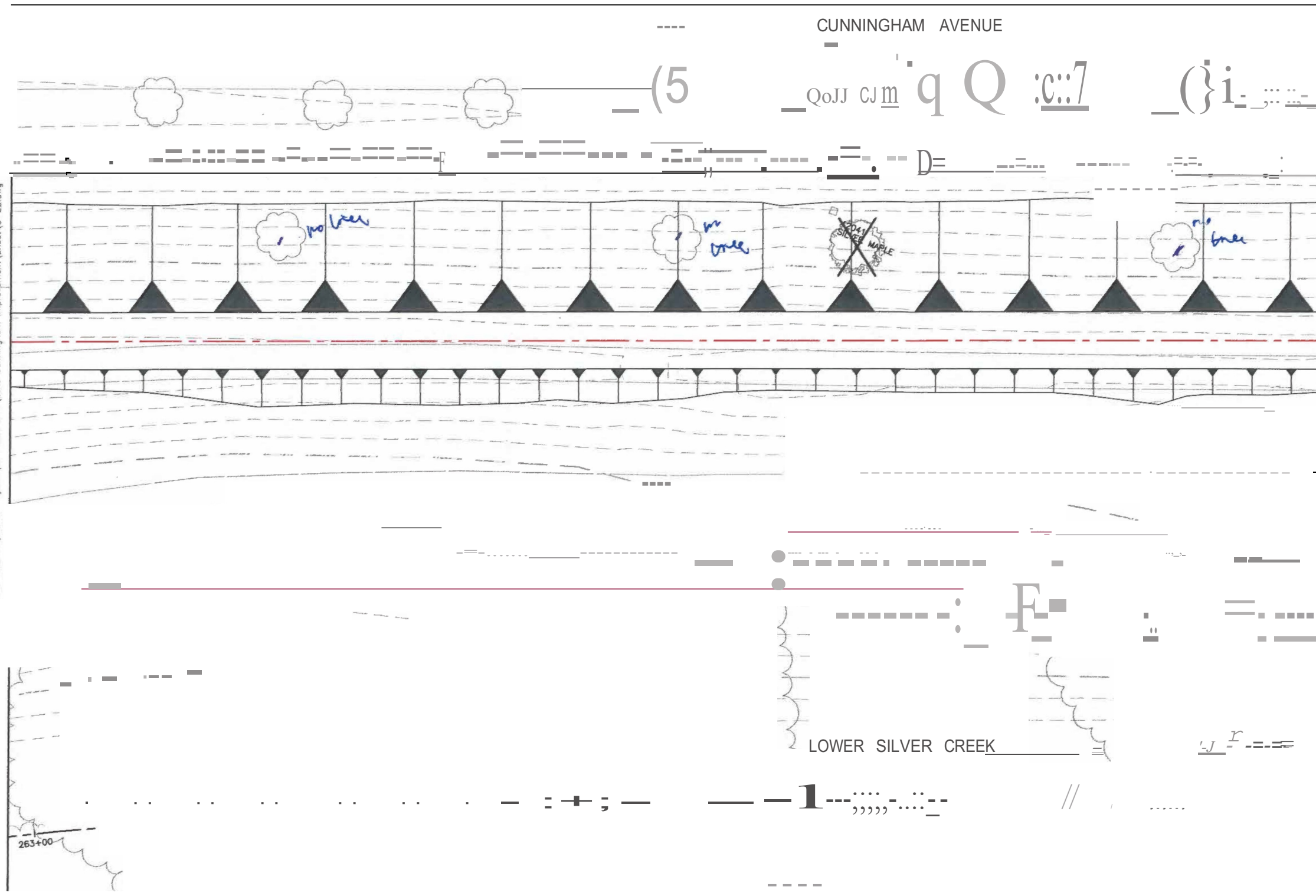

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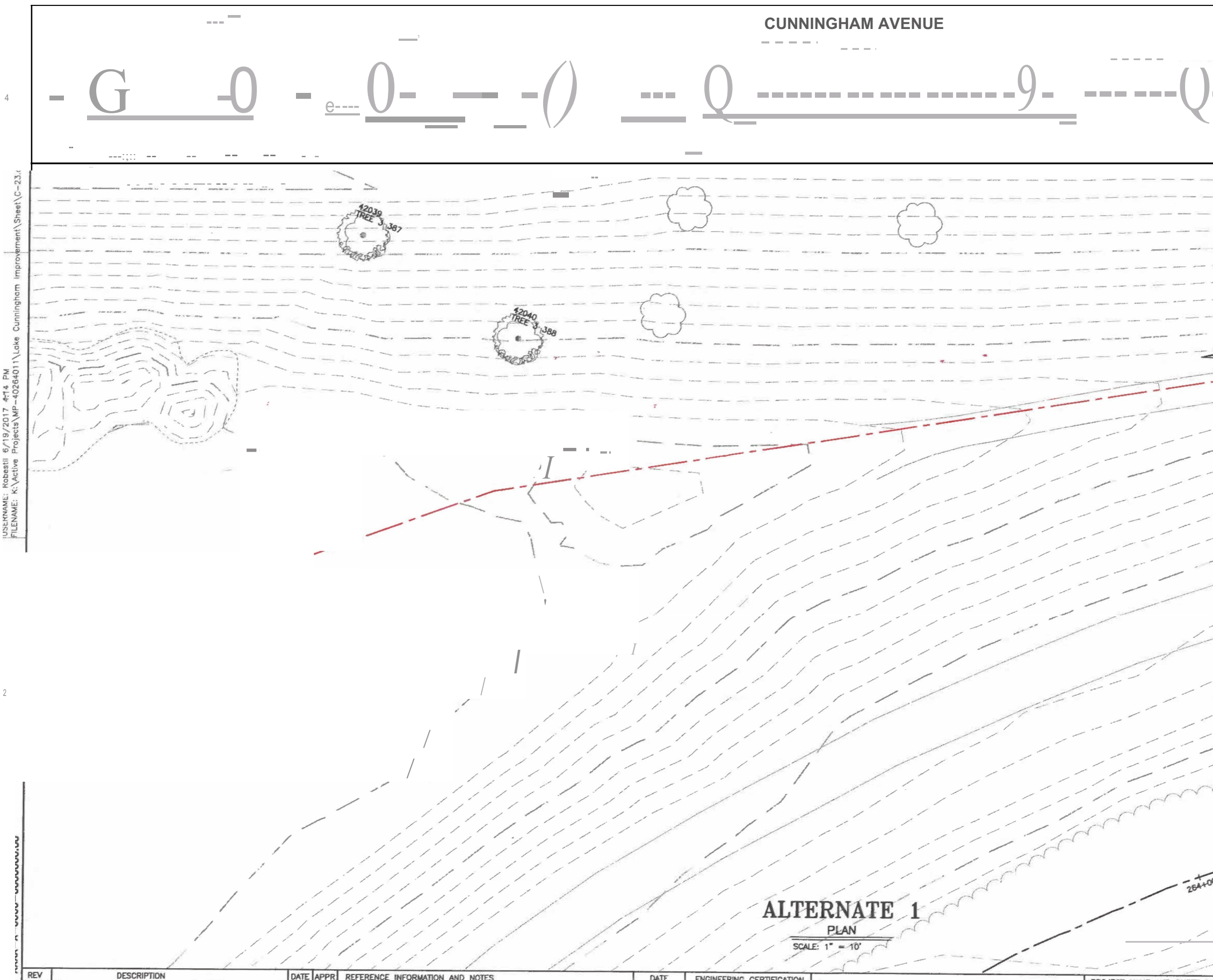

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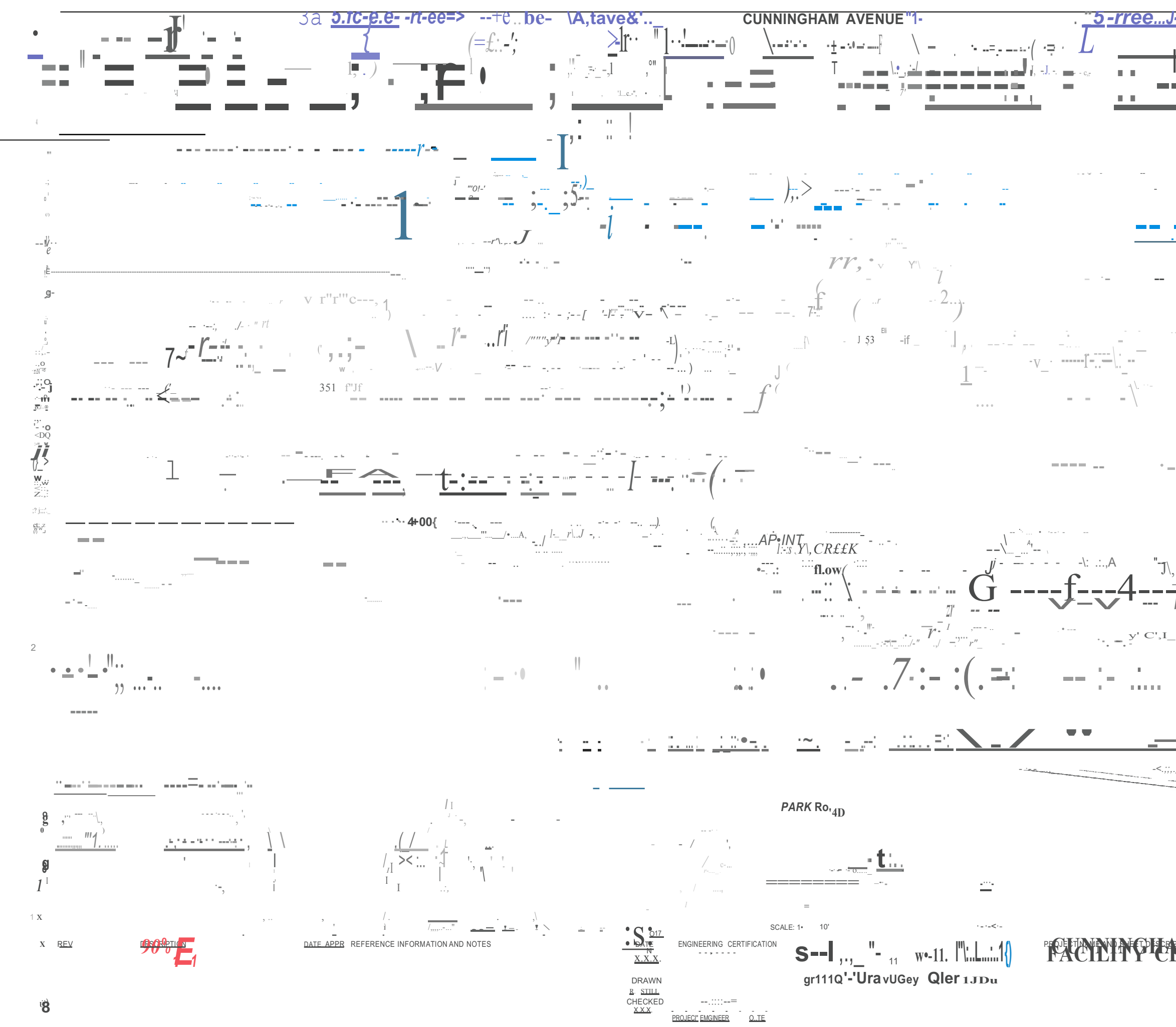
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Appendix C

Response to Comments

Response to Comments from State Agencies and Public

The Draft Mitigated Negative Declaration (MND) was sent to the State Clearinghouse for state agency review from July 20, 2017 to August 21, 2017. A public notice of availability of the Draft MND was filed with the Clerk of the County of Santa Clara on July 20, 2017, and a 33-day public review period for the Draft MND extended from July 20 to August 21, 2017. Responses to comments received during the state agency and public review periods are included in Appendix C of the Final MND. All changes to the Draft MND are described in the response below and referenced by the page number in which the revised text appears in the Final MND.

Comment	Response	MND Change (page in Final MND)
Comments received from California Department of Fish and Wildlife – Letter Received Via Email August 16, 2017		
Section 2, pages 3-5. Project Description proposes several activities on Lower Silver Creek and Flint Creek that would need coverage under an LSAA. However, the draft MND does not clearly state whether activities such as riparian habitat modification would occur on Ruby Creek. CDFW recommends that the MND clarify and describe any LSAA-related activities proposed on Ruby Creek.	Ruby Creek enters the Lake Cunningham Park boundary as an underground storm drain from South White Road. Ruby Creek transitions into an earthen channel approximately 30 feet north of the proposed location for relocation of the trash compactor and green waste collection area, which is an open, undeveloped grassy area. Construction of a new concrete pad for placement of the trash compactor and green waste collection area would occur beyond top of bank and outside the riparian corridor of Ruby Creek. Therefore, the project would not result in impacts to the Ruby Creek channel or modification of riparian habitat on the creek. **New Revisions to Draft MND** Text under the *Project Overview* heading on page 4 of the Final MND has been revised to incorporate the additional information as follows. 4. Relocating an existing trash compactor and green waste collection area about 1,500 feet southward from the northeastern corner of LCP to an undeveloped grassy area south of the Ruby Creek outfall. An electrical conduit would be installed along an existing concrete path from South White Road to provide power to the trash compactor. Text under the *Existing Conditions* heading on page 6 of the Final MND has been revised as follows. The majority of the riparian corridor in the eastern portion of the project site along the north bank of Flint Creek is dominated by non-native trees with a manicured understory (mowed or treated), while the riparian corridor in the western portion of the project site along Lower Silver Creek is comprised of dense stands intermixed with non-native trees with canopy gaps. Ruby Creek enters LCP as an underground	4, 6, 13, 54

	channel and transitions into an earthen channel in the eastern portion of the project site. The Ruby Creek riparian corridor is primarily comprised of non-native trees and a manicured understory. The proposed location for relocation of the trash compactor and green waste collection area is within LCP and is located south of the Ruby Creek outfall in the eastern ~~southwestern~~ portion of the park, about 600 feet south of the South White Road park entrance. The relocation site is adjacent to the existing Park Road, which will provide vehicle access to and egress from the site. The site is undeveloped and vegetated with grass and low ground cover. Text under the *Project Elements* heading on page 13 of the Final MND has been revised as follows. The proposed project would relocate the trash compactor about 1,500 feet southward within the park to an undeveloped area near the parks existing skate park and maintenance area. The proposed relocation site is located to the south of the Ruby Creek outfall and outside of the riparian corridor. A new electrical conduit would be installed along an existing concrete path to connect to an existing electrical line along South White Road and provide electrical power to the trash compactor. Text under the *Biological Resources* heading on page 54 of the Final MND has been revised as follows. The proposed trash compactor and green waste collection relocation area is located to the south of the Ruby Creek outfall at a vacant area vegetated with grass and low ground cover. No trees are present and the site is located outside of the Ruby Creek riparian corridor. The proposed location of the trail regrading is along the existing trail network at LCP. No trees are present.	
Section 2, Table 2.5 Best Management Practices and Santa Clara Valley Habitat Plan Conditions Incorporated into the Proposed Project. Condition 1 describes the avoidance of take of nesting white-tailed kite *(Elanus leucurus),* a State Fully Protected Species (Fish and Game Code, § 3511). However, the draft MND does not include white-tailed kite in any other section of the document, and therefore, does not address the potential presence of suitable habitat for the species. CDFW recommends that the MND adequately describe any potential nesting habitat for white-tailed kite at or near the Project site, and fully analyze the potential for the species or its habitat to be adversely affected by the Project.	The project site is located within a highly urbanized area of the City of San Jose and high disturbance land uses in the vicinity include the Reid-Hillview Airport, Raging Waters Water Park, and multiple transportation corridors. White-tailed Kite (*Elanus leucurus*) nests in dense trees away from high human activity near foraging habitat, which consists of open grasslands, meadows, agricultural fields, and marshes. A search of the California Natural Diversity Database indicates the closest occurrence of white-tailed kite is 5.9 miles to the northeast in the Diablo Range foothills. The dense riparian area along Lower Silver Creek, and the mature trees along Flint and Ruby Creek could support nesting habitat. Foraging could occur at open space within the park and at the former golf course to the east, but the habitat is marginal and highly disturbed. Therefore, breeding of white-tailed kite is not anticipated to occur within the low-quality nesting habitat on site or in the nearby surrounding area. Although the project includes removal of mature tree species to accommodate floodwall construction, these trees are not expected to be used by white-tailed kite for nesting. Therefore, project activities would not adversely affect suitable nesting habitat for white-tailed kite. **New Revisions to Draft MND**	55 - 56

	Text under the *Discussion a) Potentially Significant Impact with Mitigation Incorporated* heading on page 55 and 56 of the Final MND has been revised as follows. Special status species CNDDB occurrences ~~located~~ within two miles of the project site include western burrowing owl (*Athene cunicularia*), California tiger salamander (*Ambystoma californiense*), Townsends big-eared bat (*Corynorhinus townsendii*), Crotch's bumble bee (*Bombus crotchii*), obscure bumble bee (*Bombus calignosus*), Contra Costa goldfields (*Lasthenia conjugens*), Congdon's tarplant (*Cetromadia parryi ssp. congdonii*), Hairless popcorn flower (*Plagiobothrys glaber*), robust spineflower (*Chorizanthe robusta var robusta*), and Santa Clara red ribbons (*Clarkia concinna ssp automixa*). Western pond turtle *(Emys marmorata*) have been observed within 3 miles of the project site. The closest occurrence of white-tailed Kite (*Elanus leucurus*), a State Fully Protected Species, is 5.9 miles to the northeast in the Diablo Range foothills. White-tailed Kite nests in dense trees away from high human activity near foraging habitat, which consists of open grasslands, meadows, agricultural fields, and marshes. The dense riparian area along Lower Silver Creek, and the mature trees along Flint and Ruby Creek could support nesting habitat. Foraging could occur at open space within the park and at the former golf course to the east, but the habitat is marginal and highly disturbed. In addition, the project site is located within a highly urbanized area of the City of San Jose and high disturbance land uses in the vicinity include the Reid-Hillview Airport, Raging Waters Water Park, and multiple transportation corridors. Therefore, breeding of white-tailed kite is not anticipated to occur within the low-quality nesting habitat on site or in the nearby surrounding area.	
Table 4.1 Special-Status Species with Potential to Occur at the Project Site. Please be advised that tricolored blackbird *(Agelaius tricolor)* is currently listed as a State Candidate species under CESA. The draft MND incorrectly states that it is a Species of Special Concern.	Thank you for the comment. The Final MND will make this revision. **New Revisions to Draft MND** Text within *Table 4.1: Special Status Species with Potential to Occur at the Project Site* on page 56 and 57 of the Final MND has been revised to refer to tricolored blackbird *(Agelaius tricolor)* as a State candidate for listing as endangered (SCE).	56 - 57
Pages 57 & 58. The draft MND summarizes measures to avoid or minimize impacts on western burrowing owl *(Athene cunicularia)* if present, but does not describe any potential impacts to owl habitat. CDFW recommends that, if the Project will result in temporary and/or permanent impacts to owl nesting or foraging habitat, then the MND should include appropriate mitigation for loss of burrowing owl habitat based on the Santa Clara Valley Habitat Plan requirements.	As described beginning on page 57 of the Final MND, the CNDDB indicates burrowing owl were sighted in the northwest portion of the project site in July 2004. A biological assessment for the project site was conducted by the District on August 25, 2015. No evidence of burrowing owl presence (owl pellets, fecal matter, feathers, etc.) was found within the project area during the August 25, 2015 biological assessment and available burrowing owl habitat was limited. The vegetated margins along the creeks and managed landscape could support foraging of burrowing owls, but the land management activities (e.g. mulching; soil stockpiling) conducted by park maintenance staff limits nesting potential. The area within the project footprint would be considered poor burrowing owl habitat and is not likely to support burrowing owls. Therefore, the project is not expected to result in temporary or permanent impacts to owl nesting or foraging habitat. However, the proposed project is a covered activity within the Santa	19, 57

	Clara Valley Habitat Plan and thus the District would implement conditions specified in the plan designed to minimize adverse impacts on covered species including the burrowing owl. The project impacts on burrowing owl habitat are considered to be less than significant. **New Revisions to Draft MND** Text under the *Santa Clara Valley Habitat Plan* heading on page 19 of the Final MND has been revised as follows. The proposed project is a covered activity in the *Santa Clara Valley Habitat Plan* (VHP), which is a joint habitat conservation plan and natural communities conservation plan developed to serve as the basis for the issuance of incidental take permits and authorizations pursuant to Section 10 of the federal Endangered Species Act and the California Natural Community Conservation Planning Act. Thus, all activities associated with the proposed project must be implemented consistent with the requirements outlined in the VHP. Chapter 6 of the VHP describes conditions that help meet avoidance and minimization goals at a regional level. The conditions on covered activities are designed to minimize adverse effects on natural communities and covered species and the VHP represents a comprehensive approach for the protection of natural resources, including endangered species. Compliance with these regional avoidance and minimization measures reduces the need for individual projects to avoid and minimize impacts at the project scale and allows streamlining of regulatory requirements. The proposed project would be subject to Conditions 1, 3, 15, and 17, described in Table 2. Conditions 15 and 17 contain avoidance and minimization measures applicable to specific protected species. Those measures are described in detail in section 4 Biological Resources of this document. **New Revisions to Draft MND** Text under the *Discussion a) Potentially Significant Impact with Mitigation Incorporated heading* on page 57 of the Final MND has been revised as follows. *Western Burrowing Owl* – Western burrowing owl (burrowing owl) was sighted within the northwest corner of the project site in 2004. A survey conducted in 2008 at the LCP did not find any evidence of burrowing owls. The biological impact assessment conducted by the District on August 25, 2015 found no evidence of burrowing owl presence (owl pellets, fecal matter, feathers, etc.) within the project site and determined available habitat was limited. The vegetated margins along the creeks and managed landscape within the project site could support foraging of burrowing owls, but the land management activities (e.g., mulching) conducted by park maintenance staff ~~the City currently~~ limits nesting ~~the~~ potential ~~for nesting~~. The area within the project footprint is considered poor burrowing owl habitat and is not likely to support burrowing owls. However, the project site is mapped as occupied burrowing owl habitat in the *Santa Clara Valley Habitat Plan* (VHP) and owls occur within 3 miles of the project site. As described in Section 2: Project Description, the proposed project would be subject to applicable conditions and requirements in the	

	VHP. Condition 15 of the VHP would require the proposed project to implement a number of measures to avoid or minimize impacts on western burrowing owl.	
Page 59. The draft MND states, in regards to tricolored blackbird, that "(T]o avoid last minute changes in schedule or contracting that may occur if an active nest is found, the project proponent may also conduct a preliminary survey up to 14 days before construction." CDFW recommends that, to adequately detect any recently occupied nesting habitat, a survey be conducted seven days before the start of construction and an additional survey 24-48 hours before construction.	As required by ESA (Section 10[a][2][A][ii]) and Fish and Game Code Sections 2820 (a)(6) and 2820(f), the Santa Clara Valley Habitat Plan (VHP) includes measures to avoid and minimize take of covered species. These measures to avoid and minimize impacts are described as conditions on covered activities within the VHP. As the MND analysis indicates, there is no CNDDB record of this species within 3 miles of the project site and the habitat is fragmented and of low quality. However, as the project site is mapped as tricolored blackbird habitat in the VHP, the District would adhere to the measures described in Condition 17 of the VHP to avoid impacts to tricolored blackbird. Preconstruction survey requirements for tricolored blackbird described in Condition 17 require that prior to ground disturbance, a qualified biologist make best effort to determine if there has been nesting at the site in previous 5 years and if no nesting of tricolored blackbird within the past 5 years is evident, a preconstruction survey in areas identified in the habitat survey as supporting potential tricolored blackbird shall be conducted and will conclude no more than two calendar days prior to construction. The VHP conditions were developed in consultation with and agreed to by the U.S. Fish and Wildlife Service (USFWS) and the CDFW and represent the best available science for protection and recovery of natural resources, including listed species. The requirement as described above along with other requirements in Condition 17 would provide similar level of avoidance, minimization, and protection against impact on tricolored blackbirds as suggested in the comment. No revisions in the final MND would be needed.	NA
Comments received from San Francisco Bay Regional Water Quality Control Board – Email Received August 21, 2017		
1. The MND states that overflow waters from the lake will be directed to a storm drain that discharges to Lower Silver Creek. Please revise the MND with those details and include plans to ensure the increase in discharge flow rate and/or frequency at the stormwater outfall will not result in scour in the receiving water. (See MND pg. 12.) Specifically, additional details are needed under *Section 9-Hydrology and Water Quality, Impact c-Substantially alter the existing drainage patter of the site area*, before a "less than significant" determination can be made. While the MND states that the overflow would occur about once per 10 to 25 years, there is no information for the amount of flow, nor any protection measures for the outflow site in Lower Silver Creek to prevent scour in the creek.	In its existing condition, LCP is intended to receive stormwater flows from the surrounding creeks (Lower Silver Creek, Flint Creek, and Ruby Creek) during a 10-year flood event or greater. During a 10 year or greater event, the surrounding creeks crest banks/weirs (top of bank) at LCP, and flows are conveyed into the parking lots, meadow, and lake. Although the LCP can receive stormwater flows from a 10-year flood event or greater, the LCP was designed to detain floodwaters from the 100-year flood event in order to reduce downstream flows within Lower Silver Creek to safe levels. Regrading of the trails along the lake shoreline would convey overflow water onto the Big Meadow and ultimately would drain to Lower Silver Creek via an existing 36-inch pipe outfall. The existing outfall is designed to convey 85 cubic feet per second (cfs) of water to Lower Silver Creek which would occur flows during the 100-year event. Regrading of the trails would ensure the water surface elevation of the lake is kept at 124.5 feet or lower for capacity and does not directly convey flows to the outfall at Lower Silver Creek. Overflow into the Big Meadow would only be expected to occur once every 10 to 25 years. As overflow water would be conveyed along the regraded trails and onto the Big Meadow on an infrequent basis, the regraded trails would not	91

	significantly alter surface drainage patterns, or the amount of water flowing into Lower Silver Creek. As the proposed project would not change the existing stormwater inputs into LCP (i.e. storm flows resulting from a flood event less than a 10 year flood event would not crest the berms/weirs at the LCP), regrading of the trails along the shoreline does not directly convey flows to the outfall at Lower Silver Creek, and that the existing outfall to Lower Silver Creek is designed to handle a 100 year flood event (85 cfs), the project would not substantially increase the discharge flow rate and/or frequency at the stormwater outfall to Lower Silver Creek. **New Revisions to Draft MND** Text under the subheading *Discussion c,d)*, *Less than Significant Impact* on page 91 of the Final MND has been revised as following: LCP in its existing condition, can temporarily detain stormwater flows during a 100-year flow event, which is a flow event that has 1% probability of occurring in any given year, and limit discharge to Lower Silver Creek downstream of LCP. The proposed project would modify the existing levees along the periphery of the LCP to provide the necessary freeboard to meet FEMA standards for certification of flood protection facilities. This would increase the margin of safety for detention of floodwaters at LCP during a 100-year flow event~~, which is a flow event that has a 1% probability of occurring in any given year~~. During flows smaller than the 1% event, the proposed project would not change local drainage patterns or affect the hydrology of Lake Cunningham, Lower Silver Creek, Flint Creek, or Ruby Creek. Based on hydraulic modeling conducted for the proposed project, the flood detention facility at LCP would function as intended during a 1% flow event. Floodwater would spill into the park, Big Meadow and lake; 2,243 cfs would be diverted into the park, reaching a floodwater surface elevation of 132.75 feet NAVD, and 2,816 cfs would be released into Lower Silver Creek downstream of Cunningham Avenue. Lower Silver Creek's channel design can safely convey 2,816 cfs with adequate freeboard to meet FEMA certification requirements. Therefore, the proposed project would not substantially alter the existing drainage pattern or affect the hydrology of the area potentially resulting in off-site flooding or substantial erosion or siltation on- or off-site. ~~The existing 36-inch storm-drain drain conveying stormwater from the Big Meadow to Lower Silver creek would remain and would not be affected by the proposed project.~~ The project proposes to ~~would~~ regrade trails near the Lake Cunningham shoreline to direct water overflowing from the lake onto the Big Meadow and ultimately to Lower Silver Creek when the lake surface elevation rises above 126 feet NAVD. Overflow from the lake onto the Big Meadow would be expected to occur on an infrequent basis approximately ~~only~~ once every 10 to 25 years ~~on average~~. The overflow water would flow to the existing 36-inch storm drain which discharges ~~discharging~~ flows from the Big Meadow to Lower Silver Creek. The	

	existing storm drain has been designed to convey approximately 85 cfs from the Big Meadow to Lower Silver Creek during the 100-year flood event and would not be affected by the proposed project. As the frequency of overflows from the lake to the Big Meadow ~~water~~ would remain unchanged and occur ~~be conveyed along the regraded trails and into the Big Meadow~~ on an infrequent basis, and the storm drain to Lower Silver Creek has been designed to convey approximately 85 cfs to Lower Silver Creek, the regraded trails would not significantly alter surface drainage patterns, erosion or siltation, or the amount of water flowing in Lower Silver, Flint, or Ruby Creeks. As regrading of the trails near the Lake Cunningham shoreline would not significantly alter the drainage patterns and hydrology of the area, the proposed project would not result in on or off-site flooding or substantial erosion or siltation on- or off-site and impacts would be less than significant in this regard.	
2. While a majority of the Project construction elements will be in uplands on the top of existing levees and/or over the levee crest, a portion of the floodwalls will be within the riparian corridors of Flint Creek and Lower Silver Creek (see Figure 4). Thus, the floodwalls will likely result in fill in waters of the State, but the MND does not include references to impacts of fill due to the floodwalls. We recommend the MND to be revised with details to quantify the amount of fill in the creek riparian corridors and identify whether there is a potential loss of wetland habitat in accordance with the Water Board's no net loss policy pursuant to the Basin Plan.	A 170-foot portion of the proposed floodwall would be placed within the riparian corridor of Flint Creek resulting in approximately 0.003 acre of permanent impacts to the riparian corridor at the top of bank. The floodwall would consist of a 3-4 foot formed concrete wall with a reinforced concrete foundation placed to a depth of 10 feet resulting in approximately 33.06 cubic yards (CY) of fill placed at the top of bank. In addition, floodwall construction would require excavation of approximately 507 CY of dirt along Lower Silver Creek and Flint Creek at or close to the top of bank resulting in approximately 0.06 acre (515 linear feet) of temporary impacts. Nevertheless, the minor impacts as described above would not be considered impacts to the waters of the state as the impacts would occur well above the surface of the creeks (see Cal. Water Code section 13050(e)). With respect to wetlands, the discussion on project impacts on wetlands is located on page 63 of the MND. As excavation and construction activities would occur from the uplands and the proposed floodwall would be located along the top of bank, no wetlands would be impacted by project activities. **New Revisions to Draft MND** Text under the subheading *Discussion b)*, *Potentially Significant Impact Unless Mitigation Incorporated* on page 61 of the Final MND has been revised as following: A 170-foot portion of the proposed floodwall would be placed within the riparian corridor of Flint Creek resulting in approximately 0.003 acre of permanent impacts to the riparian corridor at the top of bank. The floodwall would consist of a 3-4 foot formed concrete wall with a reinforced concrete foundation placed to a depth of 10 feet resulting in approximately 33.06 cubic yards (CY) of fill placed at top of bank. In addition, floodwall construction would require excavation of approximately 507 CY of dirt resulting in temporary disturbance to approximately 0.06 acre (515 linear feet) of the riparian corridors along Lower Silver Creek and Flint Creek.	61
Comments received from Private Residents - Email Received July 22, 2017		
Mr. Tidwell, We've received your letter regarding Lake Cunningham flood detention facility certification project. It was addressed to the	Comment Noted.	NA

previous owner of the house. Please update your record since we are the new owners. Thank you. Mika Matsukuma Daniel de la Rosa 2597 Glen Hedge Ct. San Jose, CA 95148		
Comments received from the City of San Jose – Email Received September 22, 2017 after close of the public comment period		
Regrading of approximately 70 ft of trails near the shoreline will occur for drainage purposes. The regrading work should permit compliance for ADA access and avoid steep (8.33% or more) and sustained grades.	The City of San Jose Parks, Recreation & Neighborhood Services staff reviewed the 90% design plan sheets for the project in April 2017 during the time when the District was preparing the administrative draft MND. On June 9, 2017, the City provided comments on the project and indicated the slope of the modified trails along the lakeshore might not meet Americans with Disabilities Act (ADA) standards. On June 19, 2017, the City provided design guidelines for the modified trails. Based on the City's recommendation, the District adjusted design of the modified trails to include a slope percent of 5% or less, and this design was already incorporated in the Draft MND. Thus, no revisions would be needed to address this issue in the Final MND.	NA
In-kind replacement of existing chain-link fence is appreciated as a baseline repair/alternation. The City seeks to upgrade the appearance of the park's perimeter, and seeks a timely opportunity to provide funding for upgraded fencing. In this instance, we would be looking at tubular steel fencing.	During earlier planning phase for the project, the original project description included replacement of the existing chain link fencing damaged or removed during construction with upgraded steel fencing (ornamental fencing). However, on June 9, 2017 the City recommended via email that the District "replace the disturbed chain link fence with a new chain fence with the height and finish matching the adjacent fence." This recommendation was incorporated in the project as described in the Draft MND; therefore no further revisions would be needed to address this issue in the Final MND.	NA
Page 13, mentions a new/replacement trail. The trail should meet Class I Trail standards; 12' wide asphalt pavement.	The existing LCP entrance trail connecting to Cunningham Avenue would be replaced with a new trail connecting to South White Road. The new trail would be a Class 1 pedestrian trail paved with asphalt. As proposed, the new trail would be 10-ft wide with one-foot shoulders comprised of decomposed granite (same as existing trail). On January 20, 2017, District staff met with staff from the City of San Jose's Department of Parks, Recreation & Neighborhood Services as well as Public Works on-site. The subject of the meeting was to present and discuss aspects of project design including the proposed pedestrian trail. During the January 2017 meeting, City staff were in agreement about the proposed trail design. Following the receipt of the September 22, 2017 email from the City, the District contacted City of San Jose Parks, Recreation & Neighborhood Services staff regarding the proposed pedestrian trail width and on October 3, 2017 the District received an email from the City indicating it has no concerns with the proposed trail design. City staff also requested shoulder improvements be made of compacted virgin base rock because it has a greater longevity as compared to decomposed granite.	NA

	Per the request of the Parks, Recreation & Neighborhood Services staff, the District will use compacted virgin base rock for any shoulder improvements along the proposed pedestrian trail.	
Figure 4, shows a new pedestrian path and park entrance. We seek to coordinate with design team on optimum placement in the immediate area to ensure safe sight lines from recreational and traffic engineering perspectives.	On September 27, 2017, 90% design plans depicting the proposed alignment of the new pedestrian trail and park entrance were sent to City Parks, Recreation & Neighborhood Services staff for review. On September 27, 2017 City staff concurred the proposed trail directs people away from the intersection, which requires that they use the sidewalk to reach the crossing, and that this design addresses the City's safety concerns.	NA
Page 15, levee raising. Ideally, the surface of the raised levee will be 20' in order to accommodate further/future trail improvements.	This topic does not relate to the environmental impacts of the project as proposed. However, the District offers this following information in response to the comment. The raised levee would consist of an approximate crest width of 10-feet. The levee crest along Capitol Expressway ranges in width from approximately 40 feet to 180 feet. This is sufficiently wide to accommodate future trail improvements. The existing levee along Cunningham Avenue is substantially narrower due to site conditions and ranges in width from approximately 45 feet to 70 feet. Although the proposed levee crest is 10-feet along the Cunningham Avenue portion, an alternate location for a future pedestrian trail could be located at the lower service road which runs along the inboard toe of the levee. Therefore, the District is not able to accommodate a 20-foot wide levee crest in all areas of the project site but there is sufficient room at the LCP for future trail improvements.	NA

Appendix D

Mitigation Monitoring and Reporting Program

The following table summarizes the Mitigation Monitoring and Reporting Program (MMRP) which includes the District's best management practices (BMPs), applicable Santa Clara Valley Habitat Plan conditions, and mitigation measures identified in the Project MND. For each measure, the table provides description of the measure, implementation timing, the entity responsible for implementing the measure, and the entity responsible for monitoring and oversight of the measure.

The MMRP will be adopted by the District Board of Directors for implementation by District contractor with District oversight, as appropriate. Additionally, implementation of the MMRP will be reported and tracked consistent with CEQA Guidelines Section 15097 and permit reporting conditions.

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
AIR QUALITY					
Use Dust Control Measures	BMP AQ-1	The following Bay Area Air Quality Management District (BAAQMD) Dust Control Measures will be implemented: 1. All exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day; 2. All haul trucks transporting soil, sand, or other loose material off-site shall be covered; 3. All visible mud or dirt track-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day. The use of dry power sweeping is prohibited; 4. Water used to wash the various exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, etc.) will not be allowed to enter waterways; 5. All vehicle speeds on unpaved roads shall be limited to 15 mph; 6. All roadways, driveways, and sidewalks to be paved shall be completed as soon as possible. Building	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		pads shall be laid as soon as possible after grading unless seeding or soil binders are used; 7. Idling times shall be minimized either by shutting equipment off when not in use or reducing the maximum idling time to 5 minutes (as required by the California airborne toxics control measure Title 13, Section 2485 of California Code of Regulations), and this requirement shall be clearly communicated to construction workers (such as verbiage in contracts and clear signage at all access points); 8. All construction equipment shall be maintained and properly tuned in accordance with manufacturer‘s specifications, and all equipment shall be checked by a certified visible emissions evaluator; 9. Correct tire inflation shall be maintained in accordance with manufacturer‘s specifications on wheeled equipment and vehicles to prevent excessive rolling resistance; and, 10. Post a publicly visible sign with a telephone number and contact person at the lead agency to address dust complaints; any complaints shall be responded to and take corrective action within 48 hours. In addition, a BAAQMD telephone number with any applicable regulations will be included.			
Avoid Stockpiling Odorous Materials	BMP AQ-2	Materials with decaying organic material, or other potentially odorous materials, will be handled in a manner that avoids impacting residential areas and other sensitive receptors, including: 1. Avoid stockpiling potentially odorous materials within	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		1,000 feet of residential areas or other odor sensitive land uses; and 2. Odorous stockpiles will be disposed of at an appropriate landfill.			
Biological Resources					
Avoid Impacts to Nesting Migratory Birds	BMP BI-5	Nesting birds are protected by state and federal laws. The District will protect nesting birds and their nests from abandonment, loss, damage, or destruction. Nesting bird surveys will be performed by a qualified biologist prior to any activity that could result in the abandonment, loss, damage, or destruction of birds, bird nests, or nesting migratory birds. Inactive bird nests may be removed with the exception of raptor nests. Birds, nests with eggs, or nests with hatchlings will be left undisturbed.	Prior To and During Construction	Santa Clara Valley Water District	Santa Clara Valley Water District
Choose Local Ecotypes Of Native Plants and Appropriate Erosion-Control Seed Mixes	BMP BI-8	Whenever native species are prescribed for installation the following steps will be taken by a qualified biologist or vegetation specialist: 1. Evaluate whether the plant species currently grows wild in Santa Clara County; and, 2. If so, the qualified biologist or vegetation specialist will determine if any need to be local natives, i.e. grown from propagules collected in the same or adjacent watershed, and as close to the project site as feasible. Also, consult a qualified biologist or vegetation specialist to determine which seeding option is ecologically appropriate and effective, specifically: 1. For areas that are disturbed, an erosion control seed	Prior To and During Revegetation Activities	Santa Clara Valley Water District	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		mix may be used consistent with the SCVWD Guidelines and Standards *for Land Use Near Streams, Design Guide 5, 'Temporary Erosion Control Options.'* 2. In areas with remnant native plants, the qualified biologist or vegetation specialist may choose an abiotic application instead, such as an erosion control blanket or seedless hydro-mulch and tackifier to facilitate passive revegetation of local native species. 3. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable. 4. If a gravel or wood mulch has been used to prevent soil compaction per BI-11, this material may be left in place [if ecologically appropriate] instead of seeding. Seed selection shall be ecologically appropriate as determined by a qualified biologist, per *Guidelines and Standards for Land Use Near Streams, Design Guide 2: Use of Local Native Species*.			
Avoid Animal Entry and Entrapment	BMP BI-10	All pipes, hoses, or similar structures less than 12 inches diameter will be closed or covered to prevent animal entry. All construction pipes, culverts, or similar structures, greater than 2-inches diameter, stored at a construction site overnight, will be inspected thoroughly for wildlife by a qualified biologist or properly trained construction personnel before the pipe is buried, capped, used, or moved. If inspection indicates presence of sensitive or state- or federally-listed species inside stored materials or equipment, work on those materials will cease until a qualified biologist determines the appropriate course of action.	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		To prevent entrapment of animals, all excavations, steep-walled holes or trenches more than 6-inches deep will be secured against animal entry at the close of each day. Any of the following measures may be employed, depending on the size of the hole and method feasibility: 1. Hole to be securely covered (no gaps) with plywood, or similar materials, at the close of each working day, or any time the opening will be left unattended for more than one hour; or 2. In the absence of covers, the excavation will be provided with escape ramps constructed of earth or untreated wood, sloped no steeper than 2:1, and located no farther than 15 feet apart; or 3. In situations where escape ramps are infeasible, the hole or trench will be surrounded by filter fabric fencing or a similar barrier with the bottom edge buried to prevent entry.			
Minimize Predator-Attraction	BMP BI-11	Remove trash daily from the worksite to avoid attracting potential predators to the site.	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District
Pre-construction Survey and Relocation Procedures for San	MM BIO-1	The District shall conduct a pre-construction survey at the project site to determine the presence of San Francisco Dusky footed woodrat nests within 30 days prior to the start of ground disturbing activities. The survey shall cover the entire construction area, as well as a 50-foot buffer. If active	Prior To and During Construction	Santa Clara Valley Water District	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
Francisco Dusky footed woodrats		nests are discovered during the pre-construction surveys, their nests shall be marked and a minimum 5-foot buffer shall be established to avoid disturbance. In situations where a 5-foot buffer is not feasible, a smaller buffer may be allowed if the qualified biologist believes the reduced-size buffer would result in less impact than relocating the nest. If avoidance of active nests is not feasible, the nest may be relocated to suitable surrounding areas upon approval by the California Department of Fish and Wildlife (CDFW). Woodrats shall be evicted prior to removal of the nests and the onset of ground disturbing activities to avoid injury or mortality. A qualified biologist shall disturb the woodrat nest only after all woodrats leave the nest and seek refuge outside of the project activity area. Subsequently, the nest sticks shall be removed from the site. Relocation of the nest shall occur after sunset by a qualified biologist and the nest relocation area would be within 50 feet of the original nest location, if possible.			
Tree Replacement	MM BIO-2	For any city ordinance-protected trees removed by the project, the District shall replant native trees within LCP at a 1:1 ratio. Trees removed from the commonly identified riparian zone, shall be replaced at a minimum 1:1 ratio at or adjacent to the riparian corridors of Flint and Lower Silver Creeks and may be subject to additional compensatory mitigation requirements determined by the appropriate regulatory agencies. The details of species type removed, species type planted, planting locations, monitoring criteria, and adaptive management will be specified in a Mitigation and Monitoring Plan (MMP) completed by the District and subject to approval by the applicable regulatory agencies	After Completion of Construction	Santa Clara Valley Water District or the District's landscape contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		and the City of San Jose. The MMP will also include success criteria for tree establishment and growth characteristics.			
Tree Preservation Prior to Construction Activities	MM BIO-3a	The following measures shall be followed prior to construction activities: • The construction superintendent shall meet with the Consulting Arborist before beginning work to discuss work procedures and tree protection. • Fence all trees to be retained in order to enclose the tree protection zone, prior to grubbing or grading activities. Fences shall be 6-foot chain-link or equivalent. Fences shall remain in place until all grading and construction is complete. • Trees located within 5 feet of construction impact limits (see *Tree Protection Plan in the Arborist Report*) shall be protected from trunk damage by stacking hay bales around tree trunks (Photo 5). • Apply a 6-12" layer of wood chip mulch along access routes to minimize soil compaction, root damage, and erosion caused by heavy machinery. • Prune trees to be preserved to clean the crown of dead branches 1" and larger in diameter, and to raise canopies as needed for construction activities. Branches extending into the work area that can remain following demolition shall be tied back and protected from damage. • Trees to be removed shall be felled so as to fall away from the tree protection zone and avoid pulling and breaking of roots of trees to remain. If roots are entwined, the Consulting Arborist may require first	Prior to construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		severing the major woody root mass before extracting the trees, or grinding the stump below ground. • Tree(s) to be removed that have branches extending into the canopy of tree(s) or located within the tree protection zone of tree(s) to remain shall be removed by a Certified Arborist or Certified Tree Worker and not by the demolition contractor. The Certified Arborist or Certified Tree Worker shall remove the trees in a manner that causes no damage to the tree(s) and understory to remain. Stumps shall be ground below grade. • All pruning shall be done by a State of California Licensed Tree Contractor (C61/D49). All pruning shall be done by Certified Arborist or Certified Tree Worker in accordance with the Best Management Practices for Pruning (International Society of Arboriculture, 2002) and adhere to the most recent editions of the American National Standard for Tree Care Operations (Z133.1) and Pruning (A300). The Consulting Arborist shall provide pruning specifications prior to site demolition. • All down brush and trees shall be removed from the tree protection zone either by hand, or with equipment sitting outside the tree protection zone. Extraction shall occur by lifting the material out, not by dragging across the ground. Brush shall be chipped and spread beneath the trees within the tree protection zone. • Apply and maintain a 4-6” layer of wood chip mulch within the tree protection zone. Keep the mulch 2’ from the base of tree trunks.			

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
Tree Preservation Activities During Construction Activities	MM BIO-3b	The following measures shall be followed prior to construction activities: • Any construction activities within the tree protection zone shall be monitored by the Consulting Arborist. • All contractors shall conduct operations in a manner that will prevent damage to trees to be preserved. • All grading within the dripline of trees shall be done using the smallest equipment possible. The equipment shall operate perpendicular to the tree and operate from outside the tree protection zone. Any modifications must be approved and monitored by the Consulting Arborist. • Any root pruning required for construction purposes shall receive the prior approval of and be supervised by the Consulting Arborist. Roots should be cut with a saw to provide a flat and smooth cut. Removal of roots larger than 2” in diameter should be avoided. • If roots 2” and greater in diameter are encountered during site work and must be cut to complete the construction, the Consulting Arborist must be consulted to evaluate effects on the health and stability of the tree and recommend treatment. • Evaluate any injury to trees that should occur during construction. Notify the Consulting Arborist so that appropriate treatments can be applied. • Spoil from trench, footing, or other excavation shall not be placed within the tree protection zone, neither temporarily nor permanently. • Tree protection devices are to remain until all site work	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		has been completed within the work area. Fences or other protection devices may not be relocated or removed without permission of the Consulting Arborist. • Construction trailers, traffic and storage areas must remain outside the tree protection zone/fenced areas at all times.			
Avoid Direct Impacts on Legally Protected Plant and Wildlife Species	VHP Condition 1	Compliance with this measure would necessitate avoiding take of nesting white-tailed kites either by implementing repairs during the non-breeding season (1 September to 31 January) or by conducting pre-construction surveys and maintaining appropriate buffers around kite nests that contain eggs or young.	Prior To and During Construction	Santa Clara Valley Water District	Santa Clara Valley Water District
Maintain Hydrologic Conditions and Protect Water Quality	VHP Condition 3	Compliance with this measure necessitates implementing the measures listed in Chapter 6 (Table 6-2) of the Santa Clara Valley Habitat Plan (http://scv-habitatagency.org/178/Final-Habitat-Plan). These measures are BMPs to protect water quality and avoid other adverse effects, such as source and treatment control measures to prevent pollutants from leaving the construction site and minimizing site erosion and local sedimentation during construction. Many of these measures overlap or are similar to the District's BMPs.	During Construction	The Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District
Western Burrowing Owl Avoidance	VHP Condition 15	The proposed project would temporarily and permanently disturb areas in the western portion of the project site that are mapped as western burrowing owl. Compliance with Condition 15 requires avoidance or minimization of direct impacts to western burrowing owls. This condition incorporates survey, avoidance, and minimization guidelines from western burrowing owl conservation plans and other sources pertaining to the VHP study area.	Prior To and During Construction	Santa Clara Valley Water District	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
Tricolored Blackbird	VHP Condition 17	The project area includes riparian habitat that could potentially be used by the tricolored blackbird. Condition 17 is to avoid direct impacts of covered activities on nesting tricolored blackbird colonies. This condition in the VHP is required as it is located within 250 feet of a riparian cover type. If a project meets this criterion, a qualified biologist is required to conduct a field investigation to identify and map potential nesting substrate. Nesting substrate includes flooded, thorny or spiny vegetation.	Prior To and During Construction	Santa Clara Valley Water District	Santa Clara Valley Water District
Hazards and Hazardous Materials					
Restrict Vehicle and Equipment Cleaning to Appropriate Locations	BMP HM-7	Vehicles and equipment may be washed only at approved areas. No washing of vehicles or equipment will occur at job sites.	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District
Ensure Proper Vehicle and Equipment Fueling and Maintenance	BMP HM-8	No fueling or servicing will be done in a waterway or immediate flood plain, unless equipment stationed in these locations is not readily relocated (i.e., pumps, generators). 1. For stationary equipment that must be fueled or serviced on-site, containment will be provided in such a manner that any accidental spill will not be able to come in direct contact with soil, surface water, or the storm drainage system. 2. All fueling or servicing done at the job site will provide containment to the degree that any spill will be unable to enter any waterway or damage riparian vegetation. 3. All vehicles and equipment will be kept clean.	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		Excessive build-up of oil and grease will be prevented. 4. All equipment used in the creek channel will be inspected for leaks each day prior to initiation of work. Maintenance, repairs, or other necessary actions will be taken to prevent or repair leaks, prior to use. 5. If emergency repairs are required in the field, only those repairs necessary to move equipment to a more secure location will be done in a channel or flood plain.			
Ensure Proper Hazardous Materials Management	BMP HM-9	Measures will be implemented to ensure that hazardous materials are properly handled and the quality of water resources is protected by all reasonable means. 1. Prior to entering the work site, all field personnel will know how to respond when toxic materials are discovered. 2. Contact of chemicals with precipitation will be minimized by storing chemicals in watertight containers with appropriate secondary containment to prevent any spillage or leakage. 3. Petroleum products, chemicals, cement, fuels, lubricants, and non-storm drainage water or water contaminated with the aforementioned materials will not contact soil and not be allowed to enter surface waters or the storm drainage system. 4. All toxic materials, including waste disposal containers, will be covered when they are not in use, and located as far away as possible from a direct	Prior To and During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		connection to the storm drainage system or surface water. 5. Quantities of toxic materials, such as equipment fuels and lubricants, will be stored with secondary containment that is capable of containing 110% of the primary container(s). 6. The discharge of any hazardous or non-hazardous waste as defined in Division 2, Subdivision 1, Chapter 2 of the California Code of Regulations will be conducted in accordance with applicable State and federal regulations. 7. In the event of any hazardous material emergencies or spills, personnel will call the Chemical Emergencies/Spills Hotline at 1-800-510-5151.			
Utilize Spill Prevention Measures	BMP HM-10	Prevent the accidental release of chemicals, fuels, lubricants, and non-storm drainage water following these measures: 1. Field personnel will be appropriately trained in spill prevention, hazardous material control, and clean up of accidental spills; 2. Equipment and materials for cleanup of spills will be available on site, and spills and leaks will be cleaned up immediately and disposed of according to applicable regulatory requirements; 3. Field personnel will ensure that hazardous materials are properly handled and natural resources are protected by all reasonable means; 4. Spill prevention kits will always be in close proximity when using hazardous materials (e.g., at crew trucks	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		and other logical locations), and all field personnel will be advised of these locations; and, 5. The work site will be routinely inspected to verify that spill prevention and response measures are properly implemented and maintained.			
Hydrology and Water Quality					
Limit Impacts from Staging and Stockpiling Materials	BMP WQ-4	1. To protect on-site vegetation and water quality, staging areas should occur on access roads, surface streets, or other disturbed areas that are already compacted and only support ruderal vegetation. Similarly, all equipment and materials (e.g., road rock and project spoil) will be contained within the existing service roads, paved roads, or other pre-determined staging areas. 2. Building materials and other project-related materials, including chemicals and sediment, will not be stockpiled or stored where they could spill into water bodies or storm drains. 3. No runoff from the staging areas may be allowed to enter water ways, including the creek channel or storm drains, without being subjected to adequate filtration (e.g., vegetated buffer, swale, hay wattles or bales, silt screens). 4. The discharge of decant water to water ways from any on-site temporary sediment stockpile or storage areas is prohibited. 5. During the wet season, no stockpiled soils will remain exposed, unless surrounded by properly installed and maintained silt fencing or other means	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		of erosion control. During the dry season; exposed, dry stockpiles will be watered, enclosed, covered, or sprayed with non-toxic soil stabilizers.			
Stabilize Construction Entrances and Exits	BMP WQ-5	Measures will be implemented to minimize soil from being tracked onto streets near work sites: 1. Methods used to prevent mud from being tracked out of work sites onto roadways include installing a layer of geotextile mat, followed by a 4-inch thick layer of 1 to 3-inch diameter gravel on unsurfaced access roads. 2. Access will be provided as close to the work area as possible, using existing ramps where available and planning work site access so as to minimize disturbance to the water body bed and banks, and the surrounding land uses.	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District
Limit Impact of Concrete Near Waterways	BMP WQ-6	Concrete that has not been cured is alkaline and can increase the pH of the water; fresh concrete will be isolated until it no longer poses a threat to water quality using the following appropriate measures: 1. Wet sacked concrete will be excluded from the wetted channel for a period of four weeks after installation. During that time, the wet sacked concrete will be kept moist (such as covering with wet carpet) and runoff from the wet sacked concrete will not be allowed to enter a live stream. 2. Poured concrete will be excluded from the wetted channel for a period of four weeks after it is poured. During that time, the poured concrete will be kept moist, and runoff from the wet concrete will not be	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		allowed to enter a live stream. Commercial sealants (e.g., Deep Seal, Elasto-Deck Reservoir Grade) may be applied to the poured concrete surface where difficulty in excluding water flow for a long period may occur. If a sealant is used, water will be excluded from the site until the sealant is dry. 3. Dry sacked concrete will not be used in any channel. 4. An area outside of the channel and floodplain will be designated to clean out concrete transit vehicles.			
Use Seeding for Erosion Control, Weed Suppression, and Site Improvement	BMP WQ-9	Disturbed areas shall be seeded with native seed as soon as is appropriate after activities are complete. An erosion control seed mix will be applied to exposed soils down to the ordinary high water mark in streams. 1. The seed mix should consist of California native grasses, (for example *Hordeum brachyantherum*; *Elymus glaucus*; and annual *Vulpia microstachyes*) or annual, sterile hybrid seed mix (e.g., Regreen™, a wheat x wheatgrass hybrid). 2. Temporary earthen access roads may be seeded when site and horticultural conditions are suitable, or have other appropriate erosion control measures in place.	During and After Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District
Maintain Clean Conditions at Work Sites	BMP WQ-11	The work site, areas adjacent to the work site, and access roads will be maintained in an orderly condition, free and clear from debris and discarded materials on a daily basis. Personnel will not sweep, grade, or flush surplus materials, rubbish, debris, or dust into storm drains or waterways. For activities that last more than one day, materials or equipment left on the site overnight will be stored as	During and After Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		inconspicuously as possible, and will be neatly arranged. Any materials and equipment left on the site overnight will be stored to avoid erosion, leaks, or other potential impacts to water quality Upon completion of work, all building materials, debris, unused materials, concrete forms, and other construction-related materials will be removed from the work site.			
Prevent Water Pollution	BMP WQ-15	Oily, greasy, or sediment laden substances or other material that originate from the project operations and may degrade the quality of surface water or adversely affect aquatic life, fish, or wildlife will not be allowed to enter, or be placed where they may later enter, any waterway. The project will not increase the turbidity of any watercourse flowing past the construction site by taking all necessary precautions to limit the increase in turbidity as follows: 1. where natural turbidity is between 0 and 50 Nephelometric Turbidity Units (NTU), increases will not exceed 5 percent; 2. where natural turbidity is greater than 50 NTU, increases will not exceed 10 percent; 3. where the receiving water body is a dry creek bed or storm drain, waters in excess of 50 NTU will not be discharged from the project. Water turbidity changes will be monitored. The discharge water measurements will be made at the point where the discharge water exits the water control system for tidal sites and 100 feet downstream of the discharge point for non-tidal sites. Natural watercourse turbidity measurements will be made in the receiving water 100 feet upstream of the	During Construction	The Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		discharge site. Natural watercourse turbidity measurements will be made prior to initiation of project discharges, preferably at least 2 days prior to commencement of operations.			
Prevent Stormwater Pollution	BMP WQ-16	To prevent stormwater pollution, the applicable measures from the following list will be implemented: 1. Soils exposed due to project activities will be seeded and stabilized using hydroseeding, straw placement, mulching, and/or erosion control fabric. These measures will be implemented such that the site is stabilized and water quality protected prior to significant rainfall. In creeks, the channel bed and areas below the Ordinary High Water Mark are exempt from this BMP. 2. The preference for erosion control fabrics will be to consist of natural fibers; however, steeper slopes and areas that are highly erodible may require more structured erosion control methods. No non-porous fabric will be used as part of a permanent erosion control approach. Plastic sheeting may be used to temporarily protect a slope from runoff, but only if there are no indications that special-status species would be impacted by the application. 3. Erosion control measures will be installed according to manufacturer's specifications. 4. To prevent stormwater pollution, the appropriate measures from, but not limited to, the following list will be implemented: • Silt Fences	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		• Straw Bale Barriers • Brush or Rock Filters • Storm Drain Inlet Protection • Sediment Traps or Sediment Basins • Erosion Control Blankets and/or Mats • Soil Stabilization (i.e. tackified straw with seed, jute or geotextile blankets, etc.) • Straw mulch. 5. All temporary construction-related erosion control methods shall be removed at the completion of the project (e.g., silt fences). 6. Surface barrier applications installed as a method of animal conflict management, such as chain- link fencing, woven geotextiles, and other similar materials, will be installed no longer than 300 feet, with at least an equal amount of open area prior to another linear installation.			
Traffic and Transportation					
Incorporate Public Safety Measures	BMP TR-1	Fences, barriers, lights, flagging, guards, and signs will be installed as determined appropriate by the public agency having jurisdiction, to give adequate warning to the public of the construction and of any dangerous condition to be encountered as a result thereof.	During Construction	Santa Clara Valley Water District or the construction contractor	Santa Clara Valley Water District
Cultural Resources and Tribal Cultural Resources					
Preconstruction Worker Awareness	MM TCR-1	All earthmoving construction personnel will receive cultural sensitivity awareness training that includes information on the possibility of encountering tribal cultural resources during	Prior To and During	Santa Clara Valley Water District	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
Training		construction, the types of artifacts likely to be seen, based on finds in the site vicinity, and the proper procedures in the event tribal cultural resources are encountered. Worker training will be prepared and presented by a qualified archaeologist with appropriate experience and expertise in teaching non-specialists. The awareness training will be conducted on-site at the start of construction and thereafter as required for new construction personnel.	Construction		
Archaeological and Native American Construction Monitoring and Find Treatment	MM TCR-2	The District will retain a California trained professional archaeological monitor and a qualified trained Native American monitor for earthmoving activities within previously undisturbed soils. Construction monitoring will consist of observing operations and periodically inspecting disturbed, graded, and excavated surfaces. The monitor(s) will have the authority to divert grading or excavation away from exposed surfaces temporarily in order to examine disturbed areas more closely. If artifacts are discovered during construction, all work within 30 feet of the find will stop immediately until the qualified archaeological and Native American monitor(s) can assess the nature and importance of the find and recommend appropriate treatment pursuant to Section 21083.2 of the Public Resources Code and Section 15126.4 of the CEQA Guidelines. A “no work” zone will be established using appropriate flagging to delineate the boundary of this zone. If the monitor(s) determine that the artifact is not significant, construction may resume. If the monitor(s) determine that the artifact is significant, the monitor(s) will determine if the artifact can be avoided and, if so, will detail avoidance procedures. If the artifact cannot be avoided, the monitor(s)	During Construction	Santa Clara Valley Water District	Santa Clara Valley Water District

MITIGATION MONITORING AND REPORTING PROGRAM					
Resource Areas	**Best Management Practices, Mitigation Measures, and Other Avoidance Measures**	**Description of Measures**	**Implementation Timing**	**Implementation Responsibility**	**Responsibility for Oversight**
		will develop within 48 hours an Action Plan which will include provisions to minimize impacts and, if required, a Data Recovery Plan for recovery of artifacts in accordance with Public Resources Code Section 21083.2 and Section 15126.4 of the CEQA Guidelines. If burial finds are encountered during construction, work in affected areas will be restricted or stopped until proper protocols are met. Upon discovering any burial site as evidenced by human skeletal remains, the County Coroner will be immediately notified and the field crew supervisor shall take immediate steps to secure and protect such remains from vandalism during periods when work crews are absent. No further excavation or disturbance within 30 feet of the site or any nearby area reasonably suspected to overlie adjacent remains may be made except as authorized by the County Coroner, California Native American Heritage Commission, and site monitor(s).			